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STAMMERING AND ITS CURE

STAMMERING
AND ITS PERMANENT CURE

A TREATISE ON
INDIVIDUAL-PSYCHOLOGICAL LINES

BY
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PREFACE

THE present treatise is the outcome of experiences gathered in the course of unwearying researches covering a period of more than twenty years. During that time perseverance now and then threatened to give way, and I was frequently tempted to devote my mind to other tasks ; but the necessity which must stimulate any humane person to pass on knowledge which is likely to benefit the community urged me over and over again to continued activity in the domain here treated. I was the more anxious to master the details of the only reliable cure for stammering, since I myself languished in the gloomy and mysterious fetters of this agonizing complaint during my youth and early manhood, and knew only too well how the pleasure of conversation with friends and acquaintances is curtailed, and how oral communication with strangers is not only distressing but is sometimes prevented altogether.

I slaved my life out over breathing, vocal, and articulatory exercises by the aid of books ; but, however much I pondered over the cause of the suffering and watched its different symptoms, all my pains proved futile, nor was I spared the disheartening realization that those fetters did but strengthen the more I worked to rid myself of them. Eventually I decided to place myself under the care of specialists who professed to be able to eradicate the affliction. I visited institutes for the cure

of stammering—as many as three !—all in vain, however. I am confident that I did my utmost to carry out all instructions with the greatest conscientiousness and perseverance. The latter fact is, as a rule, not admitted by the principals of establishments of this description ; they usually put down failure and relapse to lack of eagerness and of will-power on the part of the patient. I am sure that some of the specialists act *bona fide* and are confident of the good quality of their methods. But the fact remains that my hopes in all three institutions ended in disappointment, and my observation that the fellow-sufferers whom I met at those establishments also relapsed within a short time induced me to investigate the cause of failure. I came to the conclusion that by far the largest percentage (*at least* 90 per cent.) of those who have been discharged as 'cured' are, in reality, only seemingly cured, and, when my investigations led me to discover that dread of speaking and inner psychic resistances are the cause of the complaint, I knew that mechanical exercises would not remove such subtle difficulties, and that a real and lasting cure was yet to be found.

Having 'gone through the mill' myself, I know the mental suffering, the frequently desperate moods to which those afflicted with an impediment of speech are subject, especially if they have already called in assistance at great sacrifice of time and money without obtaining any lasting relief. A person who, in moments of dread of speaking, has felt himself near a fainting fit, owing to the enormous nervous strain, alone can conceive how fettered speech affects the sufferer's mental and bodily well-being, quite apart from the hampering influences which he experiences in his professional work or in his social relations.

In the interest of many stammerers I felt it, therefore,

incumbent upon me to remove the veil of mystery which has hung hitherto over the treatment of impediments of speech, and to enlighten them as to the real nature and rational treatment of the affliction. Though I have endeavoured to present the subject in the simplest form possible, it was often not feasible to avoid technical terms.

It may further be considered a shortcoming that interesting matter has now and then been brought to a conclusion, leaving the reader high and dry, so to speak, just when interest was aroused. These broken themes, however, mostly correspond with contacts at which the subject becomes interlinked with the problem of obsessions and hysterical symptoms, and these could not be treated here.

As the application of psycho-analytical treatment is still very little practised in the United Kingdom, I have endeavoured (in Chapter IX.) to give its rough outlines. I am, of course, well aware that the presentation of an actual case of stammering treated by psycho-analysis would have elucidated considerably the different phases of such a cure. A complete analysis would, however, require a small volume to itself, and I am obliged to reserve that publication for a later time.

In conclusion, I may add that, when composing this treatise, I have thought primarily of stammerers as likely to be my prospective readers. May this treatise be instrumental in spreading a more correct view of the true nature of their affliction in their circles, and inspire them with hope, no longer a fallacious hope, but one capable of realization! If this wish be accomplished I shall consider it as the best reward for my work.

ALFRED APPELT

NOTE

THE third edition, to a large extent rewritten in response to constant appeals from my readers, contains both several practical cases and a chapter on Prophylaxis. I have, at the same time, endeavoured to bring the chapters on Aetiology and Therapeutics up to the present standard of individual-psychological science.

Munich XIII. ALFRED APPELT

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CHAPTER I

RETROSPECTIVE

HISTORICAL references to the existence in past ages of impediments of speech are both fragmentary and unreliable, owing to the incomplete observations of those times and the inability of such observers, as there were, to discriminate between the varied vocal defects that came under their notice.

One of the most notable and interesting of such references is the excuse which the great Lawgiver, Moses, tendered to God in his desire to escape from the mission for which he had been chosen: 'I am slow of speech, and of a slow tongue,' he said (Exod. iv. 10). In God's reply, as Moses records it, we see that defects of speech were regarded by the Jews as afflictions equal to deafness and blindness: 'Who hath made man's mouth? or who maketh the dumb, or deaf, or the seeing, or the blind? have not I the Lord?' (Exod. iv. 11). This is instanced again in the prophecies of Isaiah, where, in enumerating the blessings of Christ's Kingdom (Isa. xxxii. 3, 4), he says: 'And the eyes of them that see shall not be dim, and the ears of them that hear shall hearken. The heart also of the rash shall understand knowledge, and the tongue of the stammerers shall be ready to speak plainly.'

We will now turn from sacred to profane history. According to Herodotus (iv. 135), Battos, the son of Polymnestos, stammered in early childhood. His affliction, judging from the terms chosen by the historian, manifested itself in an involuntary stoppage of the voice or complete unintelligibility. When grown to manhood he asked the Pythian priestess, as the oracle of the Delphic god, how he could get rid of his agonizing ailment, and she recommended him to emigrate south to Libya. It is not improbable that the association of his proper name, Battos, with the appellative βαταλος (stammerer), is due to the possibility that young Battos received his name as a consequence of his impediment.

In the case quoted above, we have been dealing with some of the pathological and more serious of the symptoms comprised under the term 'stammering.' We will now make, through the instrumentality of the greatest Greek comedian, the acquaintance of a lisper whose defective articulation incited the refined Athenians to ridicule him, even though he was one of their most distinguished statesmen and military leaders—Alcibiades. He is reported to have been unable to articulate the letter *r* properly, substituting *l* in its place. Alcibiades, however, seems to have had the gift of making a virtue of a necessity, and indulged in his impediment with conscious coquetry.

The impediment of Demosthenes, who, with doubtful justice, is claimed by many stammerers as their most famous fellow-sufferer, comes more or less under the same head. According to Cicero, Demosthenes was unable at the commencement of his brilliant career to articulate the first letter of the name of that art—namely, rhetoric—of which he was destined to become the most notable interpreter. The articulation of the letter *r* was

to him such a stumbling-block that any development of his genius as a rhetorician was threatened with shipwreck, but ultimately he succeeded in mastering his 'slow tongue' and in making it a pliant instrument of his powerful eloquence. The means he used were those tedious exercises, which are sometimes adopted, even in these enlightened days, by stammerers, generally to their disappointment.

Judging from the Greek vocabulary, containing as it does a large variety of terms relating to impediments of speech, we are justified in the conclusion that a fair number of persons thus afflicted were to be found among the ancient Greeks. This conclusion is still further justified when we find that Aristotle (Problem XI.) especially points out that there is some method in their use, as they refer to particular forms of the various defects of speech. Such distinctions were doubtless of very ancient origin and entirely superficial, relating merely to the impression which the afflicted person made on those around him. The stimulus given to every other art and science by the development of the Greek language, seems to have had little or no effect in aiding the physicians and sages of ancient Greece to arrive at the formulation of any satisfactory classification of defective speech. This was undoubtedly owing to a complete lack of insight into its nature and the causes from which it springs. The occasional remarks which we find scattered in the works of Hippocrates, Aristotle, Galen, and others, which bear on this subject, are hypothetical and trivial. Aristotle alone seems to have had any view of the matter worth mentioning, a view which held its ground and was regarded as a dogma up to about the sixteenth century.

Amongst the Romans (as in the Mosaic era) we find stammering and lisping classed equally with other

infirmities and peculiarities. The stammerer and lisper had his special name (Balbus Blæsus) ; so had the squinter, the bandy-legged, and the long-nosed person. We also find instances of defective speech occasionally mentioned in the works of Cicero, Valerius Maximus, and Catullus, but we derive as little practical knowledge of these ailments from the Latin-speaking occidentals as from their colleagues of the East.

Throughout mediæval times research was at a standstill ; it was not until the sixteenth century that the threads, which had been dropped, were taken up again. Hieronymus Mercurialis[56] (1584), who in his statements on the subject repeatedly quotes the authority of medical and other learned men of antiquity, distinguishes between *Balbuties naturalis* and *Balbuties accidentalis*. According to his views, the cause of chronic stammering is to be found in a humidity of the brain, which disturbs the normal action of this ' central organ,' whereas accidental stammering is caused by sudden emotions and other influences, which injure the whole nervous system. This conception—which rightly makes the ' central organ ' the seat of the affliction—marks a vital progress, and may be considered to be the forerunner of most of the theories which have held the ground up to quite recent years, in spite of its faults and dogmatism. But even this small amount of advance was not kept up ; on the contrary, the researches made by the medical men of the eighteenth century—Hahn, Santorini, Delius, Morgagni—show a deplorable regression, inasmuch as they regarded stammering (which was not yet consciously separated from other defects of speech) as the result of anatomic lesions and malformations of the organs connected with speech.

NOTE.—[56], [51], [19], [68], etc. These and all such subsequent numbers refer to the Bibliography at the end of the book.

The reproach which attaches to these eighteenth-century physicians is equally deserved by the misled 'specialists' who, even up to recent years, owing to one-sided and insufficient observation of the symptoms, have defended theories which make weak and faulty conditions of the organs of speech responsible for the impediment.

Kustner [51] (1716) and Bergen [19] (1756) traced stammering back to unsoundness of the muscles of the speech-organs. Sauvage [68] (1771) thought that defective speech was due to a certain weakness of the soft palate, uvula, and root of the tongue, and the immobility consequent upon such conditions. The conception of Sauvage is closely associated with the hypothesis advocated by Mme. Leigh and by Malebouche[54] (1841). These authors attributed impediments of speech to a weakness of the tongue which caused it to be kept in an incorrect position during the act of speaking—namely, at the bottom of the mouth instead of in the roof of the mouth. This view is entirely contradicted by the facts, which do not evince the phenomena referred to.

Hervez de Chégoin [24] (1830) thought he had discovered the fundamental cause, when he drew his conclusions from certain abnormal formations of the tongue. When this member was short, or, owing to certain conditions of the ligament, was hampered in its movements, he considered that such conditions caused defects of speech, which could be cured by a surgical operation.

According to Yearsly [80] and Braid [23] (1841), certain malformations of the tonsils and of the uvula can cause impediments of speech, while Cormack [29] (1828) and Beesel [16] (1843) laid the blame upon incorrect respiration, or upon the 'misapplication of breath.' This was due to their one-sided and unmethodical manner of generalizing the results of quite superficial observations. They did

not investigate the cause which lies at the root of such respiratory disturbances. A more careful research would have shown them that their theory had no scientific foundation whatever, and that they were only substituting imperfectly observed symptoms for primary causes. Several years previous to the appearance of Cormack's theories, Itard [46] (1817) had published a short treatise on stammering, which deserves consideration, inasmuch as he is the first author who treats this affliction as a pathological symptom, which demands a place of its own among the other defects of speech. In his opinion stammering is caused by a spasm induced by a weakness of the motor organs of the larynx and tongue. This entirely original view has had a most enduring influence on the various authors who have, since that time, been engaged in writing monographs, essays, and scientific articles on the subject.

Du Soit [71] (1840) held the opinion that stammering is a result of spasms of the respiratory organs, which either take the form of tetanus or of a clonic spasm. The physiologist Müller [59] (1840) and the surgeon Dieffenbach [33] (1841), following Arnott's [13] (1830) example, considered themselves able to explain the nature of stammering satisfactorily by assuming that it was caused by spasms of the glottis—spasms which imparted themselves to the muscles of the tongue, face, and throat by morbid association. Schulthess [70] (1830), who also put the ailment down to spasms of the glottis, compared it with hydrophobia, and suggested the terms ' phonophobia ' and ' lalophobia ' as suited to describe it.

In contradistinction to these efforts, which aimed at the discovery of a circumscribed primary seat of the disease, Angermann [8] (1853) was much influenced by Itard in his view that, in an attack of stammering, all

the organs involved in the formation of sound and syllables are at the same time seized by spasm.

In 1829 Serres d'Alais [7] approached the matter from a somewhat different standpoint. As a result of minute observations, he modified and defined Itard's views, and finally classed two kinds of stammering, the ultimate cause of both of which he found in an *affection nerveuse*. One kind is characterized by clonic spasms of the articulatory muscles, while the other is due to tetanus of the muscles connected with respiration and voice production.

The question as to the causes which induce these spasmodic conditions, already opened up by Itard and ignored by the authors above quoted, was answered by later writers as follows :—

Marshal-Hall [55] (1841) and Lichtinger [52] (1844) considered stammering to be a reflex spasm caused by the *excito-motor* spinal action predominating over cerebral influence. They were of opinion that the impulses of volition, regulated by thinking, did not have, in the case of a stammerer, a sufficient amount of energy with which to prevent the simultaneous interfering occurrence of reflex actions—actions which, being independent of the will, have their origin in the spine. The disproportion between cerebral influence and spinal action could be based, according to Lichtinger, either on the lowering of the cerebral energy or upon abnormal excitation of the spinal cord. Accordingly, he discriminated between cerebral and spinal stammering, and regarded causation as due either to morbid disorders of the brain or of the spine. Klencke [47] in his work, 'Die Stoerungen des menschlichen Stimm- und Sprechapparats,' published in 1844, explains stammering as ' the outcome of a want of freedom of the soul with regard to the stimuli of that most important part of culture, speech.' He also finds

the deeper roots of this 'want of freedom' in the functions of the spinal cord and of the brain, being insufficiently co-ordinated: the action of the spinal system may be, in the case of a stammerer, absolutely or relatively increased, and may manifest the phenomena of excito-motor functions. This 'want of freedom of the soul' becomes apparent primarily in the movements of the expiratory muscles which, through spasm, adynamia, etc., are out of control of the will and are at the mercy of innervation. Such suspension is automatically followed by disturbing symptoms in the muscles of the throat and larynx, and ultimately, owing to the retained air working on large groups of nerves, spasmodic contractions are produced in the articulatory and facial muscles. Previous to Marshal-Hall, Charles Bell [17] (1832) described stammering as a 'very partial chorea,' and regarded it as due to inadequate capacity properly to co-ordinate the different actions required for fluent speech, consequent upon a certain debility of the nerves which control the organs of speech. This theory has had frequent support in comparatively recent times, and was particularly adopted by Benedict [18] (1868), Rosenthal [64] (1870), Guillaume [40] (1872), and Kussmaul [50] (1885).

Previous to Charles Bell and the authors who, together with him, had correctly located the seat of the ailment in the brain, Voisin [75] (1821) and Rullier [67] (1828) had gone much more deeply into the subject which had been treated, until their time, in so superficial a manner. Voisin contented himself with a general statement that the brain stimulates the muscles of the organs of speech in an irregular and incomplete way, but he failed to make this irregularity an object of more exact investigation. Rullier, however, took great pains in the investigation of this question, but he did not succeed in finding a

satisfactory answer. According to his view, stammering is caused, in the first place, by a disproportion between the rate at which the brain produces thoughts, and that at which it transfers them to the different stages of innervation ; and, in the second place, by an incapacity of the organs of speech to accomplish their task properly. The inability of the parts to cope with the demand made upon them, when profusion of stimuli come by quick turns (if we may so speak), is, in his opinion, the cause of the spasmodic inflexibility of the stammerer's organs. But the ' central organ ' is exclusively responsible for this phenomenon, owing to its precipitance.

Rullier's theory was almost literally adopted by Colombat [27] (1840), but, by going back to the distinction laid down by Serres d'Alais between tetanic and choreatic stammering, he corrected one mistake of Rullier's, and may be said to have contributed very serviceably to the inquiry by substituting for Rullier's *état d'immobilité spasmodique* his own *état tetanique et convulsif*. Colombat's theory, however, underwent certain modifications at the hands of Blume [20] (1843). The trouble is not considered to be brought about by central influences alone, but is caused by a disturbed harmony between two concurrent factors—thinking and speaking. Thus the disproportion can be caused partly by a particular condition of the mind, and partly by a peculiar formation or incorrect use of the organs of speech.

We meet with similar attempts of amalgamation in the investigations of Bonnet [21] (1841), Froriep and Oré [61] (1866), three defenders of surgical methods of cure. Froriep, for example, says : ' Stammering can be caused either by a mechanical incongruity in the ' motive ' organs of the tongue (consisting in an abnormal degree of tension and contraction) or by a psychic

disposition, the nature of which cannot be accurately defined.'

The compromises above mentioned proceeded from the wish to establish a practicable theoretic basis for surgical operations which were highly recommended for the removal of stammering by Dieffenbach, and were carried out with sad results. The advocates of surgical treatment either pretended to have seen successful instances or expected to do so in the future.

Undaunted, in spite of these misdirected attempts at treatment, and in spite of their finding favour in large circles for a short space of time, science continued to pursue the road opened up by Rullier.

Merkel [57] (1866), who himself suffered from the affliction of stammering, places its primary cause entirely in the psychic sphere,—the sphere of the will. A debility in this sphere may produce a disturbance of the equilibrium between articulation and vocalization. Here Merkel is in complete accord with Deleau, [31] who, as early as 1829, attributed stammering to weak impulses of the will and insufficient innervating influences on the organs connected with human speech. Merkel observed that stammering was only possible with an initial vowel or consonant, but not with a combination of vowel and consonant; the conclusions he drew from this observation cannot, however, be maintained in the face of facts.

In Merkel's footsteps treads Thomé [78] (1867), who sees the fundamental cause of stammering in an abnormal working of the central nervous apparatus, induced by the influence of certain emotions, which lead to respiratory disturbances. He arranges the psychic conditions which bring about this abnormal action into two groups: (1) Embarrassment, uneasiness, lack of confidence; (2) Excessive rapidity of thought, coupled with an

endeavour to produce the thought with corresponding rapidity.

The question as to which portions of the stammerer's brain are apt to work irregularly is answered by Ruff [66] (1885), who makes the statement or suggestion that the centre of speech has accidentally been exposed to some injurious influence, such as suffusion of blood, owing to a sudden expansion of the blood vessels of the brain, or an insufficiency of blood, owing to a spasmodic contraction of the same vessels. Such detrimental conditions would make the perfectly natural ability to speak, which exists under ordinary circumstances, impossible at that moment. The centre of speech may then be said to be so disposed as to respond to any inducement, however slight, to renew an attack of stammering. The first disturbance, therefore, which is regarded as a provoking cause of the affliction by this theorist, arises from a lesion, a shock, or some extraordinarily intense emotion.

Ruff's explanations show evident signs of having been worked out under the influence of Coën's treatise, 'Das Stottern, Stammeln, Lispeln und alle uebrigen Sprachfehler' (1883). Coën's main idea is this: 'Supposing an ordinary speaker suddenly becomes subject to an intense emotion, one of the first results thus induced is either the momentary loss of the entire faculty of speech, or that his speech, which has hitherto been fluent and natural, becomes clumsy and faulty. What has happened? Owing to the intense emotion, a sudden disturbance of the circulation of the blood has been brought about. The blood rushes to the heart and to the other inner organs, and, in consequence, there is insufficient blood in the superficial parts of the body (the face becomes pallid and the limbs tremble), while the inner organs, including the brain and spine, are

suffused. This unusual congestion at once induces an increase of pressure of blood in the organs concerned, with the result that the nervous functions of the brain and spine are immediately upset. This functional disturbance becomes apparent, in the case of a stammerer, in his short, weak, and irregular breathing, which brings about either a sudden interruption of speech altogether or a difficulty in speaking. The next moment—that is, as soon as the stimulating cause has passed over—the balance, both in the circulation of blood and in the function of the nerves, is restored, breathing becomes fuller, stronger and more regular, and speech is as fluent and distinct as before.'

In spite of Ruff's unmistakable indebtedness to Coën, he has avoided the latter's fundamental error by locating the supposed disorder in the centre of speech.

Coën himself, casually pushing aside the irrefutable observations of his predecessors, thought himself justified in putting down the aggravation of vocalization and articulation, experienced by a stammerer, to his respiration being weak and irregular, and the consequent lack of power at the moment of exhaling to overcome the obstacles induced by the position of the organs of speech. He was of opinion that the pressure of the pulmonary air is, in the case of a stammerer, lower than in that of an ordinary speaker. How Coën explains the mechanism of the characteristic symptoms is detailed on p. 80 of his book, ' Pathologie und Therapie der Sprachanomalien ' (1889) : ' As the normally innervated muscles of the " speech-apparatus "—when articulating the explosives *k*, *p*, *t*—are able to offer considerable resistance against the feeble pressure of the column of air, the bursting of the lock which produces the sound cannot normally take place. In this way the muscles are irritated, and are

therefore seized with spasmodic contractions ; the tongue is forced against the roof of the mouth or the teeth, whilst the lips are violently pressed together. In this state the patient makes the greatest effort to overcome that obstacle, but only with the result that the muscles are seized with a tetanic cramp, which finds its expression in reflexes of the muscles of face, head, the upper and lower extremities, etc.' (Translation.)

The insufficiency and irregularity of respiration—which by Merkel had been considered as one of the factors in the mechanism of stammering—is, according to Coën, caused by an abnormal innervation. The latter, again, is dependent on alterations which are to be found either in the centres or in the superficial channels of the nerves.

With Merkel, who considered the ailment to be the outcome of an insufficient impulse of the will, Schrank [69] (1877) is, to a certain extent, in accord. He held the opinion that the stammerer's will, during the act of speaking, is hampered and flurried by disturbing influences, generally consisting of feelings of dread, the origin of which may be ascribed to varying causes which would not affect an ordinary speaker. They may be brought about, either by circumstances or outer conditions, when their appearance requires an abnormally increased psychic provocation, or may suddenly enter as obsessions, without any external causation, into the foreground of consciousness, absorbing the whole of the attention which was previously fixed on other things. Here there must be alterations of a pathologic nature in the brain, analogous to those which are caused by intense feelings of dread of an approaching necessity to speak, and stammering is the result.

Near to the truth also came Wyneken and Denhardt [32]

(1890), who found the cause of the affliction to be lack of confidence and self-control. The will to speak, during the time that the necessary movements have to be innervated, is influenced by doubts which arise in the stammerer's soul as to his capacity to do so, to such an extent that the rational co-ordination of the movements is upset, its place being taken by an irregular and unbalanced play of the muscles.

An identical standpoint is taken by Ssikorski [72] (1894) and L. Sandow (1898), who hold that stammering is a psychoneurosis, based on a debility of the nerves involved in the action of speech, while each paroxysm of stammering is induced by psychic stimuli. The latter are supplied either by dread of speaking, intense eagerness to speak, or by too violent innervation when communicating matters which seem of importance to the sufferer. Ssikorski also ventures to give a theory on the subject of the greater immunity of the female sex from this malady : ' Owing to hereditary peculiarities, the motor centres of a woman's left cerebral hemisphere (which contains the organ of Broca, the centre of speech) develop, generally speaking, more quickly than a man's, and seem, thanks to a more accomplished structure of certain parts of the brain, less exposed to injuries than those of boys. This accounts not only for the earlier development of speech with girls, but also for other psycho-motor specialities of women—viz., their skill in dancing, singing, and needlework.' We shall, later on, have the opportunity of proving that this theory cannot be maintained.

The latest authors on the subject—we will only mention Coriat [28] (1915), Hoepfner [44] (1922), and Rothe [65] (1925)—have unanimously come to the conclusion that stammering is solely a psychic ailment, in the centre of which stands ' dread of speaking.' This, as a momentum of

inhibition, interferes with the automatic execution of that function.

If we sum up the facts brought to light by research, so far as they seem reliable, together with the positive results of that research (apart from those observations which refer to symptoms only), little more is left than the theory that the affliction is of a central or psychic nature induced by a disturbance of the will, the cause of which, it must be acknowledged, has remained unexplained up to quite recent years. The view which placed the cause of the impediment in the outer organs of speech may be looked upon as definitely abandoned.

From our necessarily hasty retrospect we gather that what there has been of progressive discernment by no means runs in strictly chronologic succession, but that each step which brought us nearer the goal was attended with many retrograde movements, and some entire departures from the right road.

The authors who have written on the subject of stammering, with more or less success, cannot all be touched upon within the limits of this opening chapter, the object of which is merely to present in as concise a form as possible the theories concerning the *nature* of stammering which have come before the public at various periods. We shall, however, have reason to quote in the following chapter many authors who have not yet been mentioned, and it will be seen that the bibliography of the subject is extensive.

CHAPTER II

FROM THEORY TO PRACTICE

BEFORE we attempt to discuss the pathology, ætiology, and rational therapeutics of stammering, it will be well to take a brief general survey of the historic development of the therapy.

When some understanding of the psychic suffering at the root of the distressing affliction which we are considering is arrived at, it is indeed surprising that not until the last century was the necessity realized of determining scientifically how such suffering might be eradicated. Perhaps Mercurialis was the only physician who bestowed care upon founding a treatment which was logically based on actual theories of the nature of the infirmity. Since, according to him, the complaint had its primary cause in an *intemperies frigida* and *humida*, he made it his task to fight these conditions with all possible means. To this end, he recommended the patient's sojourn in a warm and dry atmosphere, a warming and parching diet, the avoidance of alcoholic beverages, the administration of purgatives, the use of embrocations with honey, salt, and especially with sage. Associated with these means were exercises of the organs of speech by *continua locutia alta et clara*.

The medicinal treatment of stammering by diet, drugs, etc., was revived later on by Schulthess. In accordance with his theory as to the cause of defective

speech, he tried to attack the morbid inclination of the glottis to seizure with spasm by administering remedies similar to those used in convulsive diseases like epilepsy, chorea, whooping cough, and so on. The importance of speech drill, from which Mercurialis had expected a certain amount of benefit, is of very little account in the estimation of Schulthess. He looked for success to such means as divert the sufferer's mind from his affliction and occupy his imagination.

In the year that Schulthess published his book, a French surgeon, Hervez de Chégoin, tried to establish the advantage of operations for a particular kind of stammering. As we have already mentioned, he laid its cause to a faulty condition (shortness) of the ligament of the tongue, which, in his opinion, necessitated its being cut through. Hervez de Chégoin claims the doubtful credit of breaking the first lance in favour of surgical treatment for stammering. It was, however, the well-known surgeon Dieffenbach who made the treatment famous (or let us say infamous), and he must bear the odium which is justly levelled against the exponents of this serious and disastrous error. January 7, 1841, may be regarded as the birthday of Dieffenbach's process, which was carried out by cutting through the root of the tongue (with or without the excision of a sphenoid piece of that organ), and on March 8 of that same year Dieffenbach was reporting on nineteen such operations to the Institut de France.

The first news about the Dieffenbach treatment reached France at the beginning of February through the agency of the Press, and the idea was soon taken up with keen interest. A former pupil of Dieffenbach's—Philipps, of Belgian nationality—submitted two stammerers to the operation on February 6, and reported on their case at

the Medical Academy in Paris. When the paper was read on the 16th of the same month several members of the Academy were cautioned against acting rashly and without more intimate knowledge of the matter. However, the stone had started rolling, and could not be so easily stopped. Several French surgeons, despite the warning, continued to follow the directions, which appear to have been given together with the reports of Dieffenbach's alleged successes. In April, Amussat had performed eighty-four operations. As great an activity in this domain prevailed in the provinces as in the capital, Paris. Nearly 200 stammerers in France alone submitted to the operation in the course of the year. The enthusiasm quickly spread to England, where incisions in the tongue, and especially in the root of the tongue, were practised as in Germany and France, the Englishmen Yearsly and Braid, however, preferring to cut the stammerer's tonsils and uvula. These two English surgeons based this mode of operating upon the erroneous conception that, owing to the supposed faulty condition of the organs mentioned, they put obstacles in the way of normal expiration, and should therefore be removed.

In Berlin, Dieffenbach's operation was performed upon sixty stammerers. The enthusiasm which the new method had at first provoked soon subsided, and opportunity was made for a sounder examination of certain facts which, for the time, seem to have been entirely overlooked. Dieffenbach, from the beginning, had not concealed the serious dangers which are attached to the operation. As a matter of fact, his method claimed its first victim in a very short space of time. A student in Berlin paid with his life for trust in the surgeon's knife as a means of relieving him of his impediment. A second

victim was a patient of Amussat's, who, having been operated upon on April 29, died on May 17. It may be supposed that the surgeon vainly endeavoured to diminish the significance of this mishap. On June 1 he informed the scientific world at large of his successes and failures! Shortly before, Guersant had raised his first cry of warning in the *Gazette Française*. He made the results of the operations, as far as they were known to him, a matter of most conscientious investigation, and came to the conclusion that the advantages of surgical interference in cases of stammering were, to say the least, very doubtful and uncertain; that surgical treatment, at the best, only brought about an improvement in the more fortunate cases; that no records of complete cures were forthcoming, and that even life itself was seriously endangered and had been known to have been sacrificed altogether.

This was not the only frank admission of failure; others also who had tried the experiment found the courage to acknowledge their grave error. The end of the year 1841 saw also the end of what there had been of triumph in the attempted surgical treatment of stammering, though such operations continued to be carried out here and there. In 1851, however, Romberg was able to state that the surgical treatment of the affliction had been 'rightly given up.' Thus the blood-stained campaign ended with complete defeat, bringing disappointment to all who had hoped for relief, and some amount of censure on those who had conducted it.

The complete futility of surgical treatment now established, many a sufferer who had bled under the knife of the most skilful surgeons sought help in institutions where efforts were being made to attack the ailment in a more rational manner. The author has

himself met with stammerers who had undergone operations, and out of several letters selects one which is, to a large extent, synonymous with others.

'S————,
January 4, 1910.

'ALFRED APPELT, ESQ.,
'DEAR SIR,

'I am a bad stammerer, and, like so many others, have been under several treatments: first, Rev. W——, then Mr. H——, then Mr. B——, (six consecutive months), and finally Mrs. B——, at whose request I underwent three throat and nose operations to widen the breath passages. In this way I have spent the whole of my capital.

I feel very sceptical as to obtaining permanent relief, and shall be very much obliged to you if . . . etc.,

(*Signed*) 'F. P. B——.'

In order to understand the history of the surgical methods we have been considering, and to comprehend the triumph (short-lived as it was) enjoyed by the many famous medical men who were drawn into the vortex, we must take into consideration a fact which we will discuss later on in detail. A decrease of stammering did undoubtedly take place in a series of cases, and we ourselves have noticed a similar temporary improvement after operations for other purposes, and after illnesses, especially during the convalescent stage. Exhaustion and relaxation, particularly of the organs connected with speech, offer an explanation of that phenomenon. A rational therapy must decline to accept such data, since an improvement which may *possibly* become

apparent immediately after the operation contains no guarantee of permanency. Any slight improvement which may take place is not due to the operation; rather is it due to auto-suggestion on the part of the stammerer who, buoyed up by hope of relief at the surgeon's skilful hands, momentarily experiences that relief. It will be seen, later on, how great an influence suggestion has in all cases of a neurotic character.

Next to medicinal and surgical treatment stand the didactic or pedagogic methods which aim at recovering, by means of instructions and exercises, the control over the organs of speech, which the will has lost. The first efforts in this direction (with the exception of those of Mercurialis) were made at the beginning of the last century, and continued, practically without suspension, even throughout the era of Schulthess and Dieffenbach. This mode of treatment has been generally adopted, but crude and often absurd have been the measures taken to shape the principles into a practical system! Many and varied were the pedagogic ways and means employed by 'speech specialists,' since the majority of them seemed fully convinced that stammering could only be removed under, what we will term, a didactic treatment.

The first person who formulated an independent system on these lines was the French physician Itard (1817), noted for his treatment of the deaf and dumb. He considered the phenomenon of stammering a spasmodic condition caused by a congenital debility of the nerves which stimulate the movements of the larynx and tongue. Apart from the use of medicinal remedies, he prescribed systematic gymnastics of the organs of speech, such as reciting for adults and *lecture posée* for children. He required the difficult syllables to be

specially practised. A fork, placed under the tongue and encompassing the root of the tongue on both sides, was the means used to strengthen that organ by compelling it to work in spite of the obstacle. He also recommended the placing of stammering children under a foreign governess unacquainted with their language, forcing them in this way to learn the foreign language slowly, without indulging in their mother-tongue.

About the same time that Itard was before the public, Dupuytren was trying to discover a cure for stammering, and we learn from Rullier's dissertation that he is supposed to have been successful in his treatment of a young solicitor. This patient was made to speak in a singing tone, marking certain intervals by a slight movement of his foot. This proved to be a departure, which became very notable. Colombat has always been incorrectly regarded as the originator of this attempted cure, which may be called the time-beating method, Dupuytren's name, from some unknown cause, having fallen into oblivion.

Itard and Dupuytren, who appear to have tried their methods in a very limited area, were succeeded by Mme. Leigh, an American lady who, left a widow very early in life, was received into the family of Dr. Yates, a physician of New York. His daughter was afflicted with an impediment in her speech, and it was due to this circumstance that Mme. Leigh was inspired to take up the subject with great enthusiasm. The failure of many attempts at a cure did not deter her from following up the aim which was continually before her, and she is reported to have ultimately succeeded in curing Miss Yates. Elated by this first success, she applied her system to other cases, and is said to have obtained satisfactory results throughout. Encouraged by so pro-

mising a beginning, she decided to continue her work, and established an institution for stammerers in New York (1825), which boasted, at the end of 1827, of no less than 150 ' cures.' It may be mentioned that there is some doubt as to whether Mme. Leigh can legitimately claim to be the actual originator of the method which bears her name. The truth probably is that she owed her knowledge to a Mr. Broster of Liverpool, who, according to the statement of Julius,* had been very successful on these lines in Edinburgh, Liverpool, and London. Mme. Leigh sold the secret of the method to a Belgian, Malebouche by name. At first he was unable to give accurate particulars of the method; a few years later, however, he was able to supply the needed information in an article, ' Bégaiement,' published in the ' Dictionnaire de Médecine et de Chirurgie Pratiques,' 1830. According to Mme. Leigh, during the futile efforts of the stammerer to pronounce a word or letter, his tongue is lying too deep at the bottom of the cavity of the mouth. The compensation of this defect forms the salient point in her so-called American method. The tongue has continually, even during a state of rest, to be kept in such a position as to enable its tip to lie close to the front part of the palate, or to the alveoli of the upper teeth; and, since it was regarded necessary to maintain this position even during the night, a small roll of wet linen was then placed under the tongue. A series of vocal exercises were supposed to increase the mobility of the tongue and its capacity to carry out the directions of the will. Reading exercises, together with a suitable regulation of respiration, completed the system. Malebouche, on the whole, supported Mme. Leigh's views

* ' Magazine of Foreign Literature on Therapeutics,' published by Gerson and Julius, vol. xiv, p. 93.

and method, with the exception that he preferred to lift the extended tongue against the palate. He further advocated the pushing back of the lips as much as possible, so as to increase the aperture. Malebouche has, unfortunately, omitted to give the reasons which led him to advise this unnatural position of the lips. Up to 1841 about 400 stammerers were treated by Malebouche, a fair percentage of whom did not derive the slightest benefit.

Before Malebouche gave any description of Mme. Leigh's treatment, it is easily conceivable that many endeavours had been made to gain an insight into the American system. Amongst those who unsuccessfully tried to find out the secret was Cormack (1826), an English physician in New York. Though he met with disappointment, his efforts resulted in his devising other means for the eradication of the impediment. As he supposed the cause to be in defective breathing, it was to the proper regulation of the respirations that he turned his attention. According to his theory, most stammerers try to speak with their lungs empty. In order to remove this abnormal habit, Cormack prescribes a deep inspiration at the beginning of a sentence, and he requires that the words uttered should, as it were, be voiced by a strong current of expiration.

Cormack's principles have maintained their place in the therapeutics of stammering; his name, however, was rendered obscure for a long time, owing to the successes of others, and it was to Colombat that the credit of the discovery, made by those we have named, was attributed. Before the news of Cormack's experiments had reached France, a distinguished medical man of that country, Serres d'Alais, who was himself subject to the affliction of stammering. dissertated upon the

subject in an essay published in 1829. To a certain extent his advice coincides with that of Cormack, both insisting upon the necessity of a strong current of expiration for the formation of words, Serres d'Alais justifying this requirement by pointing out the fact that, when stammering, the patient, with a superfluity of energy, closes the larynx and prevents exhalation. Upon this premise, D'Alais makes it imperative to increase the pressure correspondingly of the column of air thus enclosed, giving it additional force with which to break through the resistances. He also advises the separation of the different syllables from each other by equal intervals and the exaggerated elongation of their vowels. In order to intensify the current of expiration, he recommends movements of the arms, which, in accordance with the severity of the case and the progress of the patient, shall accompany the pronunciation, either of each syllable or of the first syllable of each sentence only.

Serres d'Alais, in a later publication, candidly admits, by the way, that the ailment shows a tendency to return whenever the patient's attention is diverted from the method. In his system we evidently have the foundation of the time-beating method, which, designed already in outline in Dupuytren's treatment, gained a reputation in France under Colombat, and in Germany under Klencke and Blume. The following year brought further publications on the subject by Bell and Colombat, which gave evidence of the vigilant zeal that was shown, practically and theoretically, by experts, who aimed at finding a remedy for stammering and its attendant sufferings.

Arnott, an Englishman, who, like so many others, saw in stammering nothing more than spasms of the

glottis, concluded that the complaint would yield when the glottis was always kept open. To achieve this, the stammerer must join all the words of a sentence together, without pausing, in such a way that the glottis shall be unable to close in the interval between two adjoining words, the connexion required being made by additional vowel sounds. Intonation also played an important part in this system. Joh. Müller and Otto adopted Arnott's method later on, the latter demanding strong respirations, the avoidance of any effort, and the choice of a deep tone for the voice when speaking, in addition to the system already described.

The feature of Colombat's treatment which stands out most prominently is the application of musical time to ordinary speech, an artificial expedient of which the ordinary speaker knows nothing. The stammerer was required to speak in single syllables, all the while observing a certain rhythm by moving the thumb and forefinger against each other. Later on Colombat developed for this purpose a specially constructed metronome, which he called 'Muthonome du Dr. Colombat de l'Isère.' In addition to this system of time-beating, he introduced into his method other means which, nearly without exception, share the distinction of want of originality: the deep inspirations due to Cormack's suggestion; the drawing back of the tongue and the lifting it to the palate, recommended by Mme. Leigh; the drawing back of the lips, added by Malebouche; while an apparatus constructed of silver and ivory, placed under the tongue for the purpose of pushing it back and keeping it in that position, reminds us only too plainly of Itard's fork.

During the first two to four weeks' treatment the patients were not allowed to carry on a conversation

with any but their fellow-sufferers or Colombat himself, lest the success of the exercises should be annulled by disturbing momenta.

The exercises started with single words, the series being opened by those beginning with vowels; these were followed by others with *b*, *f*, *m*, *p*, *v* as initial sounds, and subsequently by *d*, *j*, *g* (before *e* and *i*), *ch*, *l*, *n*, *r*, *s*, *t*, *g* (before *a*, *o*, *u*), and *c* (before *a*, *o*, *u*). Then followed the reading of single verses and sentences in prose, and, later on, the relation of short stories in colloquial language.

Colombat had a special genius for directing public attention to his efforts, and used it. Renowned medical men were among his referees. The Parisian Académie de Médicine conferred on him the distinction of the Monthyon Prize. Before long he established his Institut Orthophonique, where, in course of time, over 600 stammerers received treatment, of whom more than 500 were discharged as cured, if we may trust his credibility. Unfortunately, Colombat was no more scrupulous in the respect of 'cures' than many quacks in the present day.

A method applied by Blume in Leipzig is also based on the system of time-beating. He advised breathing exercises alternating with exercises of the tongue, requiring the abdomen to be drawn in for as long a period as possible during the speech drill. As a means of facilitating this object, he recommended the shoulders being raised at the beginning of each inspiration, lifting one arm, and dropping it very gradually until the expiration had ceased and the abdomen was completely contracted. After the organs of respiration were thus regulated, he made the patient pronounce the vowels with a deep chest voice. Then followed the 'correct' formation of consonants, only worth mentioning here, because, in

those cases where *d* or *t* caused difficulties, he advised the use of a short *e* before *d* and *t*, and insertion of an *h* behind *d* and *t*. Thus, for example, such a sentence as 'Barking dogs don't bite' would be pronounced in this way:

'e-B-harking e-d-hogs e-d-hont e-b-hite.'

Charles Bell, whose views on stammering were published in 1832, was unable to give the sufferers any better advice than to begin all sentences with a vowel—advice which was based on the practical experience that the 'vowel initial sound' is exposed to disturbing phenomena in a lesser degree, though it is by no means put beyond the reach of spasmodic influences.

In the May of 1843 a sealed manuscript was deposited at the Academy of Paris, which contained a new system invented by Jourdant. This was done at the request of Becquerel, who announced soon afterwards to that learned society that, after having been treated without success for twelve years by Colombat's method, he was cured in as many days by that of Jourdant. Some time previous to the opening of the manuscript the carefully guarded system which it contained was violently attacked by Colombat and Malebouche. Owing to this opposition, Jourdant was induced to give Becquerel authority to publish the secret. The immediate result of this permission was Becquerel's 'Traité sur le bégaiement,' in which the author endeavoured to divest Jourdant's views of their empirical character and to recast them into a more scientific form.

'The stammerer expends his breath too quickly, and thus prevents it from being made proper use of for the production of vowels and consonants. It is imperative, therefore, to guard against this defect by regulating the

respirations properly. After inhaling, the stammerer has to make a short pause, during which the chest is expanded, while the abdomen is slightly protruded. Then follows the pronunciation of the word, the patient maintaining the attitude described, and setting up opposition to the chest and abdomen going back suddenly. Thus, after the words are pronounced, a sufficient quantity of breath will have to be retained for a conscious act of respiration to take place. The whole procedure is divided into three parts, each to be marked by a movement of the thumb: (1) Inspiration with pause; (2) pronunciation of one word or several words; (3) expiration of the remaining air.'

Becquerel had not treated more than a few stammerers when he was obliged to admit that the hoped-for results were not forthcoming in several cases. Nevertheless, he thought he would be justified in warranting that the application of the method would lead to satisfactory results in a proportion of trials. In the same way that Malebouche tried to justify the necessity of modifying Mme. Leigh's treatment by pointing out the innumerable failures of his predecessors, and just as Colombat blew his trumpet at the expense of Malebouche's failures, so Becquerel, in his turn, made good use of his opportunity of criticizing, in anything but a favourable manner, the work of Malebouche and Colombat. He informed his readers that their methods had proved an absolute failure with many stammerers, and that the impediment had returned in its former intensity in the cases of many patients who had visited Colombat's Institute. It may be mentioned, *en passant*, that Becquerel, in later years, developed Jourdant's method by combining with it the *gesticulation* feature of that of Serres d'Alais, as we gather from a dissertation by Violette (a pupil of Becquerel)

published in 1858. We owe to the same treatise the interesting information that Becquerel became less confident of the success of Jourdant's method as years went on, and ultimately even denied the possibility of a 'complete cure.'

This is also the period which was marked by the commencement of Emil Denhardt's treatment, though it was not applied on an extensive scale until a quarter of a century later, by Rudolph Denhardt. The latter was the first expert who realized that stammering is induced by psychic influences only, and that, in order to effect a cure, it was necessary to apply counteracting suggestions. Unfortunately, like all his predecessors, he made the disastrous mistake of adding breathing and speaking exercises to the psychic measures. Assuming that a stammerer, when speaking, either entirely omits the breathing movements required for phonetic purposes, or carries them out in an incorrect manner, he began by endeavouring to make the sufferer familiar with the conscious use of the muscles of the ribs when inhaling. The mouth must not be opened beyond the breadth of a straw, as, otherwise, the usual abdominal respirations set in, which, in his opinion, should not take a prominent part in the formation of sounds. Great care has to be taken to avoid a premature waste of the inhaled air, and to ensure that the whole of the inspiration be used for the formation of sound. The words of a sentence have to be drawled and pronounced in such a way that they are, as it were, borne by the slowly escaping breath. The whole emphasis is put on the vowel of the first syllable, whilst the articulation of consonants is carried out as quickly and smoothly as possible. The stammerer has to concentrate his attention on the vowels, and must particularly endeavour to seize the first one with full

effect, whereas he has to consider the consonants as an inferior element in the words, and to slur over them easily and quickly. Denhardt thought in this way to attack the tendency of the stammerer to allow the articulation of consonants to predominate over vocalization. He was also of the opinion that a vigorous co-operation of the mouth, especially of the lips, was of the greatest assistance to the speaker. He further laid stress on the words of a sentence being strung together in such a manner that the whole sentence forms a *single* coherent word, as it were. If the stammerer, after successfully commencing the sentence, experiences difficulties as he proceeds, he has to treat the word which has become an obstacle, as he would treat the commencement of a new sentence. He must inhale deeply, elongate the first syllable, and, for a second time, must try to make the sentence into one coherent word. Other rules were made. The sufferer, for instance, should always speak with both rows of teeth as far distant from each other as possible, while a scarcely noticeable 'h . . .' was to be prefixed before the opening vowels, in case their pronunciation offered any difficulties. At the outset the patient was frequently placed before a looking-glass, in order that he might see to advantage the unbecoming contortions of his facial muscles, etc.

Denhardt has treated more than 2,500 stammerers, and claims to have cured 93 per cent. The latter figure is more than exaggerated ; as a matter of fact, his *permanent* cures reach an appallingly small percentage. Suffice it to say that the author has twice been treated by Denhardt, and that neither he himself nor any of the many fellow-sufferers he met at Denhardt's Institute, and with whom he kept in touch afterwards, found a permanent cure there.

The juggling with speech of everyday life, which we have met with in nearly all the methods that have been mentioned, is to be most severely condemned, quite apart from the fact that tricks of any description cannot possibly remove deeply rooted psychic resistances. The worst instances are undoubtedly the time-beating methods, such methods having no foundation in the normal condition of natural speech at all. It must, of course, be admitted that the stammerer's attention is directed into other channels by those means, with the beneficial result that the fatal thought of his affliction does not have the chance of intruding as often as it would do. Any system which binds the sufferer to use a way of speaking which deviates from the accustomed form naturally reckons with that circumstance. So long as the patient is able to make use of those artificial 'crutches,' the affliction actually decreases *for some time;* and it is in this restricted sense alone that we can grant the right to the champions of such systems to speak of 'successes.' Unfortunately, the person trained in this unnatural manner only too soon finds himself unable to make use of the 'crutches' for any practical purposes. Even the slightest excitement may be sufficient to give his train of thought another direction altogether, with the result that, all artificial support being completely knocked over, the stammerer finds himself a cripple still! It is to be regretted that the time-beating methods are still practised, particularly in the United States of America and in Great Britain, where we find them combined with vocal gymnastics (sometimes even by the aid of dumb-bells), breathing exercises, etc.

After this short digression we will return to our chronologic reports.

Klencke has repeatedly given his views on stammering

in detail, the last time he wrote being in 1866. In his treatment he aimed at strengthening the mental control over the respiratory organs and developing these organs by systematic exercises. By various 'drills,' by means of which the phonic inspiration—the *inspiratio costalis*—should take its proper place, the breathing organs were brought to more intense activity. For preference he applied shouting (in order to strengthen the vocal cords), gymnastics, fencing, swimming, cold sponges, and, to strengthen the lips, he induced the patient to speak for some time with his teeth closed. In the second week the stammerer had to begin practising vowels. After a deep inspiration a short pause was made; then followed the elongated pronunciation of 'Ah . . .' until the store of breath was exhausted. Combined respiratory and vocal exercises, after a model devised by Klencke, came last.

The establishment of the right proportion between vocalization and consonantal articulation was brought about by mechanically aggravating the articulatory movements. The most important feature, however—the keeping of a fixed time—was also required by Klencke in his system. In order to accustom the stammerer to speaking according to time, he either gave him a baton or induced him to move thumb and forefinger towards each other, and thus to accompany all his words syllable by syllable. The temptation to leave off time-beating too easily led to a serious relapse. Not until several years later would Klencke allow his patients to lay aside these tricks.

Hand in hand with the respiratory exercises a psychic and moral influence was supplied by the attendant instructor, the aim of which was to rouse the stammerer's confidence, to give his soul a new verve, and encourage

his self-reliance and energy. Viewing the ætiology of the affliction as he did, it is self-evident that Klencke would also apply medicinal means. Being under the impression that the cause was to be found in a disorder of the nervous system or in scrofula, he endeavoured to attack these causes by prescribing belladonna, opium, iodide of potassium, etc. His chief point, however, was the didactic side of the treatment, medical remedies playing quite a secondary, but not always an unimportant part.

Chervin, another enthusiast in the cause, who practised in France and Belgium, required a period of complete silence at the commencement of the 'cure,' a prescription derived very probably from Katenkamp, who considered that the actual treatment of the patient should not begin until he had abstained from speaking for a period of six weeks. If within this time he happened to have the misfortune to break silence, he must regard the injunction as commencing again from that day. The fundamental idea of this peculiar proceeding (approved also by Wineken and others) was adopted in Chervin's system, otherwise the latter does not contain anything but forced gymnastics or training of the respiratory, vocal, and articulatory organs, which occupied the patient from 7 a.m. to 6 p.m. It would be futile to reproduce a series of those exercises, as all of them show clearly that the leading principle and the main momenta are anything but new and original.

For the correct execution of the exercises the teacher serves as a model to the patient. The principle of 'imitation' laid down here will probably have been applied by anyone who has honestly tried to remove impediments of speech. What is further recommended by Chervin—such as slow speaking, opening of the rows

of teeth, the accompaniment of each syllable by a 'natural' movement of the hand—contains nothing that we have not already met with.

Since the time of Mme. Leigh and Cormack, the regulation of the respiratory functions occupied rather an important position in the therapeutic prescriptions relating to stammering. With the time-beating method (especially in the style which is particularly associated with Klencke's name) systematic breathing exercises form, as it were, the basis of treatment.

This close connexion has, however, been broken up in comparatively recent years by Coën, who, during the first four weeks, filled the time exclusively with respiratory exercises. This training enables the patient strongly and completely to inhale for fifteen seconds, to retain the inhaled air for sixty seconds, and to regulate the expiration quite arbitrarily—i.e., the stammerer has to learn at will to carry out the act of expiration quickly and strongly, on the one hand, and slowly and in a prolonged manner, on the other. Later on, both inspiration and expiration are also practised in a combination of intervals of certain durations. Not before the beginning of the fifth week are vocal gymnastics added to the treatment. These are arranged in such a manner 'that they are apt, on the one hand, to stimulate and strengthen the action of the muscles of the larynx, and, on the other hand, to increase the elasticity of the vocal cords and of the muscles of the thorax.' After a deep inspiration the single vowels are formed as long and as loudly as the breath and the voice of the patient will allow, making the tone gradually swell to greater force, and then, as gradually, to die away. In further pursuance of the exercises, the connexion of several vowels during one expiration is then taken up: *a—e, a—i, a—o, a—u; a—e—i, a—e—o, a—e—u;*

a—e—i—o, etc. In order to avoid too strong a tension of the ligaments and the irritation which would result from it, Coën forbade his male patients to use the *falsetto* notes. At the ninth week the exercise of the so-called speech drill commenced, which consisted of exercises in syllables and the reading of poetry and prose.

To attack the abnormal innervation which is the fundamental cause of the affliction, Coën applied electricity, certain medicines (ferrum, quinine, and opiates), and suitable hydropathic remedies, such as cool demi-baths, to be taken daily.

The duration of the treatment generally averaged about 140 days, though Coën mentioned 48 days as sufficient for slight cases and up to 310 days for severe ones. His statements in his different publications about permanent cures and lasting improvements are very contradictory. Like his colleagues in the present day, he has not been careful to avoid ' terminological inexactitudes.'

As we saw, Coën (together with Klencke, Kussmaul, and others) applied medicinal means in his treatment of stammering in addition to his curative pedagogics. The application of medicine as the chief part of a cure has been tried in recent years, but never with any success. Mercurialis, Schulthess, and Romberg were altogether unsuccessful in their mode of treatment. Now and then the efforts of medical and non-medical advisers, enthusiasts in the department, have been productive of very curious results. About forty years ago a medical expert in defects of speech, Gerdts of Bingen in Germany, applied a tincture consisting of rectified alcohol, peppermint oil, and chloroform, the object of the concoction being to ' still the cramp of the diaphragm,' to which he

attributed the cause of stammering. Schmalz, whose name is respected in the field of aural diseases, suggested an embrocation of petroleum for the throat. The application of this remedy produced, particularly in Sweden, a nearly invincible distrust of any treatment for the infirmity, a distrust which lasted for several years. Later on, Langenbeck experimented on stammerers by inoculating them with croton oil. Needless to say, this also proved futile.

No doubt many more such instances could be recorded if everything that has gone on in the privacy of the medical man's consulting room were made public. One can easily understand that, until quite recently, the non-success of treatment through the ordinary channels of materia medica has necessarily caused stammerers to seek relief from their distressing symptoms by other means, and electricity has been one. Coën allowed electricity quite a secondary place in his treatment; while others (among them men of renown) thought that they had found in this science the most valuable, if not an altogether conclusive, curative agent for the complaint. Others, however, assumed a calmer, and some even a sceptical, attitude towards this new departure. Klencke declared positively that he had never come across any lasting results from electrical treatment, and Rosenthal's experiments proved that the continued application of the inductive current to the head, larynx, and hypoglossus was absolutely futile. Unfortunately, owing to specious advertisements, the conviction is deeply rooted in many minds, even in the present day, that the 'marvellous curative influence of electricity' will ultimately triumph over the impediment, in spite of all previous failures.

To the medical faculty, then, we may attribute efforts

made (in all good faith, we are sure) to cure stammering by applications of medicine and of electricity, as well as the surgical operations of Dieffenbach ninety years ago. Well-known medical men, who have made the deepest possible study of the subject, have been able to cure neither themselves nor others of this malady. This is the chief reason why, gradually, the work was taken up by non-medical men, some of whom have put forth stupendous energy in their efforts to solve the difficult and apparently insoluble problem. A host of minor satellites, who have thrust themselves into the arena, deserve to be pilloried, as being responsible for a shameless charlatanism, which blots the pages of the history of this subject. Men of positively no education, without experience, without insight into so much as the nature of stammering, have the presumption to offer their help and to describe their treatment (save the mark!) as infallible. That such persons never entirely disappear from the scene, but continue to maintain a 'successful' existence, must be considered a proof of the regrettable fact that a large number of people are still to be found who are easily cajoled and victimized. It is, however, not only the illiterate who are thus engaged; sad to relate, many self-styled experts, with education enough to make themselves well acquainted with the subject, imitate systems, such as we have put before our readers, and play a daring game with them. Needless to say, these systems always come before the public as the 'quite new and original method of' so-and-so. And, crowning all other unscrupulous adventurers, we must not omit to mention the quack doctor who eradicates stammering in little or no time with some infallible drug.

After this digression, we are glad to return from our

necessary trip into provinces so unpleasant. We have, however, but little to add to what has already been told of the various modes of treatment.

In the course of the last thirty years a system for the cure of stammering has found a very considerable circulation in Germany and Austria, namely, that 'originated' by Gutzmann of Berlin. It represents, however, nothing more than a slightly altered imitation of Denhardt's method. Its notoriety was not due to the merits of the system, but solely to its being adopted by the Boards of Education, which, since 1886, have endeavoured to attack the impediment while such children as were affected were passing through the scholastic period. Special courses of treatment under trained teachers were provided. Similar efforts have been made in Great Britain in recent years. While respecting these praiseworthy endeavours, we fear that the hopes entertained of success have not been realized. Circumstances make it impossible for the treatment to be individual, or to influence the pupil's life outside the school, since the child, when once emancipated from the teacher's suggestive control, necessarily falls back into its old habits of stammering.

As far as we are aware, there have been no further developments of treatment which can lay claim to any originality up to the end of the last century. Many so-called experts have wisely avoided publishing their methods; but, to judge of the results obtained by these 'secret systems,' it is very unlikely that the public would be benefited were their 'discoveries' made generally known. Our own close investigations entitle us to some amount of confidence in the assertion that we should in these secret methods probably meet with nothing but old acquaintances. To give only one illus-

tration, we will quote the principles of the system developed by Beasley, which has been more or less imitated in recent years by several other 'specialists' in the United Kingdom. The fourteen rules of which this system may be said to consist are as follows:

1. Think of clause to be spoken (imagine it written).
2. Drop lower jaw slowly and smoothly.
3. Open mouth in position 'Ah.'
4. While opening take good breath easily from abdomen.
5. When coldness in glottis is felt let breath return.
6. Start and get a good hold of first syllable.
7. Form words on continuous sigh 'Ah . . .'
8. Speak slowly; elongate the vowels.
9. No pressure, no effort, no hurry.
10. Emphasize final consonant of each clause only.
11. Completely exhaust the breath at the end of each phrase.
12. Never hold the breath.
13. Before any difficulty say 'Er . . .'
14. Keep up the continuity of the sound.

Any comment seems superfluous, since the rules contain nothing that has not already been known for years.

Fortunately, during the last decade those who have sought a cure for stammering have gradually been led into the right path and have started from a correct basis—namely, that a stammerer is not, and never has been, lacking in the faculty of carrying out all the 'movements of speech' correctly. What does happen is that he experiences a momentary hindrance by hampering *mental* impressions. Thus, intelligent investigators

reject more and more conclusively all tiresome exercises which aim at a systematic training of the organs of speech, having at last begun to realize that the stammerer *can* speak, provided that no psychic influences interfere. Speech drill of any description is seen by such investigators to be utterly superfluous.

There have been different ways and means applied to remove the psychic obstacles which make stammering an obsession. The psychic therapeutics employed for the removal of these inner hampering influences may be divided into three categories, in which the first and second are closely related:

1. Actual hypnosis or trance.
2. Verbal (non-comatose) suggestion, or commanding suggestion, as it might be termed.
3. Educational method, with or without the addition of auto-suggestions.

In the first case, the patient is put into a state which excludes arbitrary actions and suspends consciousness more or less, thus becoming a puppet, with no will of his own, in the hands of his hypnotizer. In the second case, an attempt is made (without noticeably influencing consciousness and automatic functions) to shape the patient's impressions, feelings, and actions after the commands or persuasion of the suggester. In the third case, an effort is made to influence the patient in an educational way by a more definite appeal to his intellect than to his faith in authority, and it is required that the sufferer shall take an *active* share in the cure. He must try to regulate his train of thought and dispose his actions towards the endeavour to get cured, and must bring his will into harmony with this desideratum.

Hypnotic and non-comatose (hetero-) suggestions have been known to improve stammering temporarily, but

the effect mostly wore off by degrees. In the end these means, like so many others, failed in their object, in spite of the great hopes raised by the promising experiments made with hypnotic suggestions in Nancy, Paris, and elsewhere.

With regard to educational therapeutics, we are glad to be able to state that beneficial and lasting results have been obtained, especially in cases where the patients have faithfully co-operated by means of intelligent auto-suggestions. Of those who fought in the front rank for educational therapeutics we may mention Dubois,[84] Rosenbach,[63] Payot,[62] and Coué.[30]

But even thus far it had not been realized that the problem of 'dread of life' represented the essential point of all forms of hysteria, phobias, and obsessions. The phobias, including stammering, had hitherto been the hieroglyphics of neurology; queer signs were observed, yet no one was able to interpret them. It was especially due to Freud [37] that a premise was found on which the cryptology of neurotic people could at last be deciphered, to some extent. Freud turned his attention towards the psychic contents of the personality, and endeavoured to gain an insight into what had hitherto been enigmatical, by properly taking into account the patient's individual impressions and his general view of life. After practically applying this novel mode of research for several years he arrived at the conclusion that the traumatic influence of infantile erotic incidents with their consequences (repression and displacement) had to be considered to be the essential causative moment in the psychogenesis of nervous symptoms. Although further experiences soon proved that the infantile sexual impressions of nervous persons by no means differ, to any appreciable degree, from those of 'normal' people,

he adhered to the view that the ' psycho-sexual constitution ' invariably formed the basis of nervous disorders, the symptoms of which coming to the fore under the influence of an abnormal distribution of libido and under the pressure of a causative constellation. In Freud's teachings the idea of ' the unconscious ' derived from Janet's conception of the ' dissociation of the neurotic personality,' plays a decisive part. Whereas Janet, however, had started from the supposition that the dissociation of the personality was due to the dynamic influence of emotions, Freud looked upon the psychic contents of his patients as being the cause of the dissociation. And he considered himself entitled to expect a cure of nervous symptoms by removing that dissociation and thus reconciling the ' Ego ' with the ' It.'

In the course of the last twenty-five years, psycho-analysis has been applied to a considerable number of cases of stammering. The results, however, have been quite satisfactory but in isolated cases, the ' interpretations ' undertaken by means of the psycho-analytical technique being in general insufficient to bring about the required transposition of the nervous psyche. Such successes as have occasionally been achieved must mainly be attributed to the encouraging influence of the psycho-analyst concerned.

At present, psycho-analysis on the whole takes up the same point of view yet that it already held about thirty years ago, having not succeeded in creating practical foundations for a new pedagogics. It was left to Adler's [3] Individual Psychology not only, in a very great measure, to accomplish that task, but also clearly to set forth those moments that give aim and direction to the healthy as well as to the diseased psyche, at every emergency.

On looking back at the history of the attempts to cure one of the most distressing afflictions that flesh is heir to, we cannot fail to notice that each of the different attempts, even the quite irrational ones, did, at least in the beginning, show some results. Though a large amount of self-delusion may have crept in, or the old motto *Mundus vult decipi, ergo decipiatur* may have been acted upon, a remnant of cures undoubtedly can claim reliability. We shall later have the opportunity of showing in what manner this fact may be explained.

CHAPTER III

MECHANISM OF SPEECH

IN order to prove our contention that all forms of speech drill can be done away with and that stammering can be treated solely by psychic means, we will present the affliction in its various forms, and, in order to facilitate matters, we will give illustrations from its counterparts. In the first place, we will picture the manner in which normal speech is brought about—that is to say, how a child learns to speak. Dr. J. Wyllie, in his book entitled 'The Disorders of Speech,' speaks with regret of the small advantage that is taken by 'the medical parent' of the opportunities he has of noticing 'the phenomena presented in the course of the development of speech in his own child.' This, however, he proceeds to say, 'is a tedious process, requiring much self-denial and patience,' and he mentions Charles Darwin and Professor W. Preyer as having been amongst the few who have made these observations with great perseverance and success. In the second place, we will notice what processes in the human organism are brought into play with each normal act of speaking.

The use of articulate language demands movement of the mouth; a person opens, closes, rounds, purses up his lips, and so forth; occasionally, when lips and teeth part, the tongue becomes visible, now in this, now in that position. When looking closely, one further

notices that the front portion of the throat takes part in the process of speaking, and, finally, that the chest works more noticeably than usual, expanding and contracting more quickly, whereas in times of silence—in normal sleep, for instance—the heaving and the lowering of the thorax show about equal duration.

All those movements, the collective acting of which causes vibrations of the air, we term articulate language ; all those movements of mouth, larynx, and lungs are caused by the contracting of certain muscles and the simultaneous expanding of their counterparts within the organs mentioned. As everybody knows, with the movement of any part of the body a pair of muscles or parts of them are in mutual action with one another. When a part of the body, owing to the contraction of one muscle, has undergone a change of its position, the same muscle is not able to regain the original position, but a second muscle is required, by contraction, to move that member of the body into the opposite direction.

All muscles that we can move by an act of our will—the muscles which close and open the mouth, for instance—are connected by nerve-fibres with the central station in man—the brain and spinal cord. When one of these nerve-fibres is reached by a stimulus, the corresponding muscle reacts with a contraction. When, therefore, during the act of speaking, now these, now those parts of the mouth, throat, and chest move, such movement is caused by contractions carried out by this, then by that muscle ; these contractions, again, are the results of irritations or stimuli of the will which reach the different nerves.

In order to produce a single sound—e.g., ' Ah ! '—several contractions of muscles are required, and also several nervous stimuli, which partly follow each other

and partly march side by side. A child (as will generally be known) does not bring into the world the art of enacting this multifarious play of nervous stimuli. What he brings with him is, apart from the organs required for speech, a certain predisposition for speaking, which he owes to countless previous generations. Thus, certain parts of the nerves are more sensitive than others; consequently they can be put into action more easily. The art of speaking, however, has to be gradually learned by the individual being, and the practice of this art commences very early. The first cry with which an infant, unpleasantly affected by the sudden change of temperature, salutes its new environment, initiates this—always unconscious—practice. Mostly to the annoyance of his nurse, but much to the advantage of his cultivation of speech, frequent outbursts of crying follow later on, induced either by hunger or by any feelings of inconvenience or dislike. The child whose ear soon opens and gradually awakens takes in his own crying with his mind, and, by the synchronism, presently notices the connexion between the movements of the muscles he feels and the crying he hears.

Those paroxysms of crying are, as already mentioned, induced in the nervous channels by feelings of dislike. These feelings live in those nerves which are termed sensorial. From these sensorial nerves, those nerves are stimulated by reflex action which are connected with muscles, and more particularly those motor nerves are influenced which, owing to heredity, are easily accessible by nervous stimuli—viz., the nerves connected with expiration, the vocal ligaments and the mouth, on the one hand, and the nerves moving arms and legs, on the other. In other words, when feelings of dislike arise, the child cries and moves his arms and legs about.

These muscular movements do not always show the same intensity, the intermittent actions of the child, when moving his arms and legs about and when crying, alternating with each other. This is evidently connected, on the one hand, with the varying intensity of the feelings of dislike, and, on the other hand, with conditions of exhaustion in the motor nerves. In the same degree in which the feelings of dislike and the strength of the nerves rise and fall during the paroxysm of crying, the intensity of the crying voice alters. Sometimes the crying increases spasmodically, and assumes the timbre of wilfulness or obstinacy ; only a small amount of intention seems to be united with the crying, so that, in this period, the child is already acquiring the capability (by influences of his will) to put in the background the reflex character of crying after it is once started by feelings of dislike. These moments, where feeling makes room for volition, augment from day to day, especially when the infant notices that the nurse responds and helps him. They are of the greatest importance for the development of speech : each of these acts of volition, each obstinate cry which sharply interrupts the reflex crying, helps the child to leave the latter period and to pass on to that of arbitrary production of sound.

Progressing in his mental and physical development, the child, according to the mood which is prevalent—here, also, the feeling is the mother of the sound—soon begins to crow or to yell, and, occasionally, even forms a cultured sound in addition to the other ' wild ' ones. At first the exercise is quite unintentional ; in time, however, the child hears the playful sounds, and, not rarely, finds a delight both in his momentary products and in the muscular movements inducing them. This feeling of delight induces the baby to repeat such sounds

and to utter over and over again his ' bbb,' or his ' ah-ba, ah-ba,' or ' ah-boo, ah-boo,' and so on. These repetitions, therefore, are no longer a mere product of chance, but the child has been induced, owing to his pleasure in the tones of his voice and his muscular movements, to produce those sounds spontaneously by the aid of the nerve-channels which have just been stimulated. The repetitions are the second bridge leading to the conscious production of sound.

Let us suppose baby is feeling very comfortable in his cosy crib. The child's attention then lives quite in the sphere of feeling, and—in moments of supreme comfort—without intention he stirs those nerves and muscles which, particularly ' sensitized ' by the practice of previous generations, produce tones of a contented description, such as ' ah-boo,' uttering the sounds even perhaps a second and a third time. By degrees the child becomes attentive to the melodious tones—that is to say, his attention is now diverted from the sphere of feeling to that of hearing. When, however, the sound has died away, he returns, under the influence of the warmth of the bed, into the sphere of feeling ; again resounds the tone, and again baby pricks up his ears, and so forth. When the child is somehow reminded of this tone later on, the sense of comfort need not fully reach that previous degree, the joyful thought of the sound heightening contentment up to the intensity required. So soon as this degree has been reached, the feeling of comfort again induces that sound. Thus the sphere of hearing, through the sphere of feeling, is connected with those nerves which produce sounds of speech. As it is with the child, so we find it with the adult. It is not necessary at all to suppose that hearing seeks for other ways to the organs of speech than those which are opened up by comfort. As

is the case with the baby, so later on in life a comfortable frame of mind and a desire to talk are also in a pronounced proportion to each other. When we are in an extremely happy mood, only a very small inducement to talk is required to make us squanderers of words; whereas, when we are down in the dumps, it requires somewhat stronger interests to draw even scanty remarks from us.

When we think of a sound, certain auditory nerves (that is to say, their inmost fibres) at the same time move in us in a fixed succession, connexion, and time; and each sound, thought of quietly, induces, in the way just mentioned, a group of irritations in the centre of word-locomotion, again in a fixed succession, connexion, and time. When, for instance, the child thinks of that 'ah-boo,' the connexion between the two centres immediately becomes outwardly noticeable, and the child utters that 'ah-boo,' provided that the sphere of feeling is sufficiently stimulated. In the ordinary way both centres are separated from each other; we mostly think silently. However, when the interest in speaking increases, and the pleasure of speaking is not restricted by more powerful factors, that separating layer is broken through, by reflex action, as it were, and the group of irritations corresponding with the silent thoughts at once begins its action in the centre of word-locomotion. As, at first, with a senseless word-image, so, later on, with single sounds, syllables, and words, a corresponding group of successive irritations is associated in the motorium. According to individual habit and momentary intention, these pairs of groups are large or small. A complex of words flowing from the mouth in succession, without a pause, seems to be connected with a corresponding complex of thoughts,

so that we need only once think of such a structure of thoughts to make it rattle out mechanically, like a chain, in the motor apparatus, without our being conscious of all the details. In other words, while speaking a sentence, we can already think of the next one to a certain extent. The more frequently a child, in repeating the sounds, uses those junction-lines between the word-image centre and the word-locomotion centre, the more traversable they become ; the more that layer separating them seems to lose its resistance, the more easily the feeling of comfort induces the action of the organs of speech.

By the aid of those trained junction-lines between the word-image centre and the word-locomotion centre, the child ultimately begins to repeat also such sounds and syllables which he has not spoken himself for the first time, but has heard from his environment. We will suppose that the mother has shown the child how to pronounce the word ' papa.' At first, conducted by the ear, in the word- (or sound-) image centre an impression is induced in the shape of an irritation of certain nerves, in a fixed succession and intensity. The child likes—the word being of the nature of music to him—to find pleasure in the same sound once more ; the imitative instinct begins to take rise, which induces the baby to mimic the word ' papa.' Having already a certain routine with the articulation of ' bbb ' and ' ah,' he, after several failures, ultimately succeeds in producing ' bābā.' That sound is, to a certain extent, like ' papa,' but is not quite correct yet. The child himself perceives the difference very well, owing to the control carried out by his ear. Further exercises, strongly promoted and supported by his mother's commendation, eventually produce the wished-for word ' papa.' The joy at this

achievement generally finds its jubilant expression in frequent repetitions of the acquired word.

In the same way, as with *b* and *p* and *a* and their connexions in *ba* and *pa*, the baby gradually learns to pronounce all vowels and consonants—that is to say, more and more paths between the word-image centre and the word-locomotion centre are formed. Having thus, to a certain extent, learnt how to form all the sounds which are used in the language of his environment —following the principle of imitating first those sounds which appear easiest to him, and then the more difficult ones—the child tries to consolidate his possession by vigorously practising, in a playing manner, the innumerable associations of vowels and consonants, which become syllables and then words.

Already, with the first awakening of the senses, the auditory word-images begin to be connected with the images of persons and the things signified by them; so, for instance, the word-image 'papa,' heard by the child, is associated with the image of the person thus called. All these images of persons or things together form a third centre, the so-called centre of ideas. It is therefore at a very early age that connexions between the word-image centre and this centre of ideas are formed. The more frequently the nervous current (or, psychologically speaking, the child's attention) travels from one centre to the other, the firmer and more fluent become those connexions, and the better he understands what is meant by the word 'papa,' and the word presents itself in his mind with increasing facility when he thinks of his father.

When the child, on seeing his father, wishes to call him, and therefore utters the word 'pāpā,' first the word-image centre has to be stimulated, and only from

here—not immediately from the centre of ideas—the centre of word-locomotion can be stimulated; in other words, a word has always first to be thought of silently before it can be uttered.

Thus the child soon begins to combine ideas with the words which he hears, and amongst the words imitated by him frequently those are found to which he attaches a meaning. This stage represents but first steps. A moment comes, however, when, looking at an object, the characterizing word occurs to the child (for example, when looking at milk, this word enters his mind; or, inversely, when thinking silently of the word, at once the impression of the corresponding liquid is associated); not until this moment does speech begin to become a *means of thinking* to the child. When, from this moment the child longs for the milk, he at the same time (at first rarely, then more frequently) thinks of the word 'milk'; from now the movements of his arms more and more adopt the character of gestures which are connected with the word thought of.

When ultimately the child occasionally succeeds in uttering such a word simultaneously, he has reached a still higher stage: speech has now become to him a *means of expression.* According to the tone with which he utters the word 'milk,' it means either 'I want to have milk,' or 'That is milk,' and so forth. Before long two words are pronounced one after the other, and thus, when two impressions are brought into relation with each other, almost a sentence is evolved—'Milk hot.' Verbs also enter into the circle of conception, at first in the simplest form—'Have milk.' Later on they are—often, of course, in an ungrammatical manner—conjugated too—'Baby eated.' The number of words spoken in *one* breath, by degrees, grows, and finally the

child also learns how to give the words the grammatically correct position. All this progress is made by first repeating the words like a parrot, thus impressing word-images on his mind, and afterwards forming the expression of his thoughts independently.

As it is a long, weary road of development and training that a child has to travel before he masters articulate language, to a certain extent, it is not to be wondered at that not a few (temporarily) stumble on the way. Some need plenty of time for a distance which is traversed by others at a flying pace. The desire to speak, the temperament, the fitness for education varies with the individual, while the impulse of speaking which the environment supplies, and last, but not least, the physical disposition, all combine to promote or retard the child's progress. Most children understand more of the words spoken by their parents, brothers, sisters, etc., than they are able to pronounce themselves, and in many there exists the eager desire to say things which they find still too difficult to utter ; in short, a disproportion often becomes apparent between conception and imitation, on the one hand, and between the desire to speak and the capacity to do so, on the other. Especially important is the latter point. Very lively children are eager to say as much as possible in the quickest time available, but their organs of speech are not trained enough yet to follow such haste of thought ; they are then inclined to exert themselves, and to increase the pressure on larynx and mouth. In this way not only the speech nerves are irritated beyond measure, but the children also feel the incapacity of their organs of speech. This enters their consciousness, causing them to dislike speaking, though this dislike appears only very momentarily. Two influences, therefore, meet here in an injurious way—a physiologic and psychologic one ;

their intensity gradually increases from one action connected with speech to another, unless more powerful physical and psychic proceedings counteract them and remove their traces. In nearly all cases nature succeeds, thanks to the inherited routine of previous generations, in forcing its way through triumphantly, and in balancing gradually that disproportion between the desire to speak and the capacity to do so, but slight reminiscences of nervous irritability (that is to say, slight uneasiness in speaking, owing to intense emotions, dislike of speaking, and embarrassment) become still noticeable for some time to the physiologist and psychologist.

On the whole, certain indications of the manner in which a person has learned to speak are apparent to the attentive and experienced observer by the way in which that person expresses himself. We will now turn to the adult. By a very simple instance we will explain the proceedings which take place with an ordinary speaker when uttering a sentence, and point out those momenta which intervene either in a furthering or in a hampering way.

Supposing a person has to make some remarks on a beverage set before him. First of all, he, of course, tries to find out what *is* standing before him. He sees that it is a liquid ; by its colour and smell he supposes it to be cocoa. Having tasted it, he finds that it is cocoa, and that it contains plenty of sugar, and that it is hot ; he feels now that he has burnt his mouth. By means of the senses—viz., of the eyes, nose, taste, and feeling—stimuli (according to the physiological conception), apperceptions, impressions, and thoughts (according to psychological conception) are abundantly transferred to the centre of ideas. Here the matter ends in the case of a deaf and dumb person ; he continues to work silently

with these impressions by putting them in reference to each other. A normal individual, however, at the same time employs the word-image centre. Each apperception —i.e., each irritation of the nerve-channels connected with the four senses mentioned before—is followed up by an irritation of the junction-lines between them (the centre of ideas) and the word-image centre; in other words, each observation is connected with word-images spoken inwardly: 'That is a liquid,' 'It is coloured like cocoa,' 'It smells like cocoa,' 'It tastes like cocoa,' 'It is very sweet,' etc. It is, of course, entirely dependent on the choice of the individual as to which of these sentences are to be uttered—that is to say, in connexion with which of them the centre of word-locomotion has to come into action.

Smaller or larger groups of thoughts are, as already mentioned, associated with a smaller or a larger group of stimuli for the motorium. Many a stimulus seems to rush forth immediately and involuntarily. When the person burns his mouth with the cocoa, either a cry escapes him or the exclamation, 'Hot!' If he possess a fair amount of self-control, he will use a whole sentence: 'This is hot!' 'This stuff is hot!' 'This cocoa is hot!' In this case the temperature of the cocoa evidently is the most important thing to him, and this side of his apperceptions, therefore, predominates over the other.

Apparently, the thought of heat predominates, simply because this quality obtrudes itself particularly strongly upon the observer. That these sensorial nerve-channels and, consequently also, motor-channels are irritated depends:—

1. On the *intensity with which the object acts.* If, however, the same person has shortly before tasted a

liquid which is hotter still, but quite bitter, he notices the heat much less than the sweetness of the cocoa. Further, the direction which is chosen by the irritation in the sensorium and consequently, also in the motorium, of speech is dependent :—

2. On the *momentary condition of senses and mind*, influenced by previous irritations and particularly by the individual's state of health or frame of mind. For, when we feel well, everything is impressed more easily on our mind ; the nerve-channels seem to be more passable ; everything is going like clockwork when we feel very comfortable ; whilst, on the contrary, when we are indisposed, we are as lazy in thinking as in speaking. Analogous to the latter state of mind, which induces feelings of dislike, though confined to a shorter time (in comparison, however, acting much more intensely), are certain emotions which burst forth violently, such as terror. Here we see distinctly (it should be mentioned, by the way, that this phenomenon is not absent when any strong feelings of dislike assert themselves) that the organs maintaining the process of life—viz., stomach, lungs, heart, kidneys, etc.—play an important part in these psychic proceedings. The irritation of terror, coming on with great and sudden vehemence, would annihilate the nerve-channels struck by it, if this irritation did not spread over the whole of the nervous system by means of the brain centres, and were thus lessened. Naturally, this irritation becomes especially noticeable in the motorium. Under the influence of terror, all muscles show the tendency to contract suddenly, whereas the organs worked by them are retarded in their movements, provided that the affected nerves and their counterparts are equally irritable. If, however, the irritability of the nerves differs from that of their counter-

parts, the movement of the organs is only retarded if the group of nerves chiefly active is less irritable than its opponent, otherwise, a momentary acceleration is the result. This applies both to the voluntary muscles—e.g., those of the organs of speech—and to the involuntary —e.g., the cardiac muscles. We notice the shock of the limbs, owing to the general contraction of the muscles, and perceive that retardation to simulate paralysis. This paralysing feeling is still increased by the anelectrotonus simultaneously induced, by which the influence of voluntary stimuli on the nerves and muscles is weakened.

Fear, dread, anger (at least at the first moment) produce similar effects ; in short, everything that causes unpleasant sensations (even good news broken to us suddenly) is in its effects, at first, decidedly disagreeable. The emotions derive their special character from the contents, intensity and duration of the perceptive irritation inducing them. According to the contents, this perception is particularly connected, now with the organs of breathing, now with the organs of the circulation of the blood, etc., by way of association, so that, according to the contents of conception, this or that organ is more affected. This influence is made unpleasantly conspicuous in the motor nerves—e.g., those of the organs of speech. When dread is directed to the organs of speech, these nerves are afflicted threefold : (1) By irritations of volition ; (2) by the irritation of dread ; and (3) by attention. He who dreads the pronunciation of certain words, or letters, concentrates on these words particularly frequently and intensely, thus irritating these parts of the word-image centre especially strongly, with the result that, from here, the centre of word-locomotion also receives extremely intense stimuli ; it cannot, therefore, be wondered at that the nerves succumb to this threefold irritation.

3. It further depends on *attention* which nerve-channels are irritated (and to what extent) by an apperception. The observer may perhaps just have been engaged in matters which interest him to such a degree that he has no inclination for anything else. The pleasure his thoughts have experienced with that occupation takes the visual point of his consciousness back to it over and over again. To return to our illustration, his attention for the liquid put before him is considerably divided, and he will either take a long time in finding out what he is tasting, or he will set to work very superficially. In the latter case, the traces of his action will not cause deep impressions on his memory, and, further, he will be apt to make some mistakes in speaking when relating his observations; words which are associated with things interesting him far more will crowd forward automatically. Attention itself is not at all times equally fixed even on objects which afford us pleasure. The great differences that are to be found in the capacity of concentrating the attention on one subject, for a longer or a shorter period, chiefly depend on the individual 'leading line' (cfr. Chapter V).

4. Of great importance is also the *observer's degree of culture.* By a child, all those observations (that is a liquid, that is sweet, etc.) are actually made singly and step by step. The child is first compelled to seek after words for some time; he will apply circumlocutions here and there, and ultimately will produce the sentence word by word, sometimes even syllable by syllable. With an adult, on the other hand, many associations are already trained to work quite automatically, which cannot be carried out by a child without laborious reflection. Naturally, a certain amount of attention has always to be bestowed on the act of speaking; it is,

however, directed to different sides of the process of speaking during the various periods of a child's development—namely :

(*a*) In the period of imitating sounds—i.e., so long as the child is not yet able to speak the different sounds as well or as badly as his people do—the child, in the first place, pays attention to the words spoken by other persons ; attentively he repeats them silently ; tries to say them and listen to his own word-productions, comparing them with the words of other people. He pays attention to the movements of his own muscles only when he intends imitating other people's movements of the lips.

(*b*) In the last part of this period, in which words are connected with thoughts, the child's attention is concentrated first on the thought and then on the linguistic expression ; he, first of all, listens to single words, especially to the last ones of a sentence—their image not being spoiled by other impressions at all—and tries to repeat them (echolalia) ; then he listens to the adult's formation of sentences, and endeavours to emulate him. The attention with regard to the correctness of sounds and the controlling action of the ear (which, of course, never ceases entirely) is now considerably inferior to his care in regard to the contents and formation of the sentence.

(*c*) Finally, from the end of this period, where the formation of the sentence develops more and more mechanically, the speaker's attention is principally bestowed on the contents of the sentence. An adult, in the first place, thinks of what he is going to say, and only in the second place of the grammatical form ; but he pays very little attention to hearing himself speak, nor does it ever occur to him *to watch how he moves his mouth, etc.* He speaks—and that is the result of many

years' practice, not to mention the congenital disposition —quite automatically, unless he choose to assume affectation. This is the reason why most people have not the remotest idea as to which muscles have to be brought into action to form the different sounds—that is to say, how they shape the mouth, etc.—when pronouncing, for example, an *a*, *d*, *f*, *g*. Elocutionists and many ' speech-specialists ' seem to put this fact down to a lack of culture ; here we cannot agree with them at all, but, in conformity with one of the most eminent authorities on defective speech,* we see in the fact ' that we do not know the construction of our speech-mechanism at all, the *best guarantee* for the smooth performance of the movements, for the correct and quick working of speech. Owing to the will already finding everything prepared and simply adapting the trained mechanism to its purposes, it will achieve the latter most easily. Just as the commander-in-chief, in order to direct the 100,000 members of his well-organized and trained army in the proper way, has to give his orders only in general outline, we merely need, in order to carry out the most complicated movements of our organs of speech, *to have the wish* to convey a thought by this word or that sentence—and we actually utter it ; fortunately, we need not to care further about the single actions required in the communication between the countless inner telegraph-stations. When our message is correctly worded and handed in, and if the organism is in normal working order, we can be certain of it reaching its destination.' We shall return to this point later on, when dealing with the ætiology of stammering.

5. It is obvious that, for the intensity of the impressions, the *time during which the observation or irritation*

* Professor Dr. Kussmaul, ' Die Störungen der Sprache,' 1881.

lasts is also of great importance ; the same applies to the frequency of that influence.

6. It is further not unimportant whether *a long or a short time has passed since the object was observed last.* It is evident that the traces of previous irritations by degrees disappear, if the nerve-channel has not been stimulated recently. We forget what we have not seen nor practised for some considerable time—at least so far as ' indifferent ' recollections are concerned. We may in an anticipatory way here mention that impressions of memory which have been repressed by a psychic effort do *not* undergo any change, owing to the lapse of time.

Duration and frequency of the nervous irritation, the observer's state of health, his education and the intensity of his attention are, therefore, favourable to the act of speaking and to the previous act of thinking.

The attitude of the nerves with regard to attention teaches us also that smaller interruptions are welcome. The curve of attention rises and falls—that is to say, each more intense exertion of the ganglions is of itself followed by a relaxation. It is not possible, with the same eagerness, to listen to a speaker for hours ; if we should compel ourselves to do so, we feel fidgety, which shows that we do something unnatural. For this reason, every speaker earns the thanks of his listeners, if, from time to time, he either makes a pause or recapitulates briefly, thus giving them the opportunity to rest, to a certain extent. In fact, it is somewhat preferable to listen to an orator who, speaking in a conversational tone, seeks for suitable terms, without any signs of hurry, than to one who rattles off his speech.

In the domain of the motor nerves the want of rest becomes also noticeable by greater or smaller pauses in the action of one and the same muscle (and of one and

the same nerve) setting in automatically. When one muscle is contracted, the counterpart takes rest. We find the same in the alternation of accented and unaccented syllables—i.e., of syllables which are pronounced more strongly or less strongly; and if this alternation, this rhythm, please us, we find the explanation in the feeling of comfort experienced by our nerves, owing to this alternation between greater and smaller activity. With each syllable, spoken more gently, the speech nerves gather new strength; such a manner of speaking, consequently, causes us less work, and our organs of speech appear to us more elastic and more able to perform their work. This does not apply to the recital of poetry, but the emphasizing of accentuated syllables in prose also affords us the same striking facility in speaking. Again, the changing succession of vowels and consonants allows pauses, now to the articulatory organs, now to the vocal cords. Equally agreeable is the alternation between inspiration and expiration to the muscles of the respiratory organs. In the domain of the articulatory organs, lips, tongue, etc., can alternate with each other. When, however, we have to form two equal sounds immediately in succession, the second one is somewhat harder to pronounce, for the reason that, twice in the same way, exactly the same organs are irritated without a pause; consequently, those languages in which a continual change between vowels and consonants prevails, not only sound better, for a permanency, but they can also be spoken more easily, the different organs of speech coming into action by turns. The pleasure in the alternation and the facility in the action of speaking thus caused refers also to the timbre. The speaker who keeps on using the same pitch will not only lull his listeners to sleep, owing to their nerves being actually overtired,

but speaking gives him much more trouble than when changing his pitch frequently. This alteration of the timbre is, in truth, based on nothing else than a change of innervation, by means of which the nerves are given the opportunity of resting, to some extent.

If of all these momenta favourable to the act of speaking one or several are missing with an individual, he will speak less well than somebody with whom this is not the case. The absent-minded, badly educated person, or one who feels out of sorts, may suffer from feelings of apprehension, and be unable to fix his interest on anything for some time—such an individual is bound to speak badly. Speech is, considering the intimate connexion between the centre of ideas and that of the word-images, so closely interlaced with the inmost being of man that it can be rightly called ' a mirror of the soul '.

CHAPTER IV

THE PATHOLOGY OF STAMMERING

IN order to give a full insight into the nature and origin of stammering, we must start from a collection of good evidence. To this end we will first describe what a close observer notices, what he hears and sees when in company with a stammerer; then what the latter notices himself, especially what he feels and thinks immediately before, during, and directly after an attack of stammering. For the 'symptomatology' we have copious material before us; for the first part (observations of a spectator) the profound studies of Ssikorski; for the second part (self-observations of a stammerer) the comprehensive statements of Kussmaul, Denhardt, and others.

1. 'An essential primary symptom,' says Ssikorski, 'is a spasm noticeable in the domain of one or several special mechanisms which together form the faculty of speech as a symmetrical function. As a rule, the spasm rises suddenly in the midst of free and normal speech, momentarily disturbing the articulatory movements or destroying their clearness and integrity.

'(*a*) The *duration* of the spasm is mostly very short, and is only measured by seconds; nevertheless, a paroxysm always forms a sharp interruption of speech, disagreeable to the listener's attentive ear. When the

spasm ceases, the articulation is continued with complete regularity up to a renewed stoppage.

'(*b*) Affected by the spasm are : Either single muscles, or, which is more frequently the case, physiologic groups of muscles or entire associations of single groups, in the shape of a *co-ordinated act more or less compound* which, however, presents all the properties and symptoms of an involuntary spasmodic movement.

'(*c*) As to the *extension* of the spasm, it is first confined to those muscles which belong to one or another component of the complicated speech mechanism ; in inveterate cases, and when the single paroxysms are very intense, it goes beyond those boundaries, and also seizes very many other muscles of the body.

'(*d*) The *intensity or degree* of the spasmodic muscular contractions varies considerably ; mostly the contractions are very intense, sometimes even extremely intense and painful ; frequently, however, only moderate, reminding one of the usual voluntary contractions of the muscles during the act of speaking, which circumstance induced some authors to suppose that these spasms are voluntary, though intensified, normal contractions.

'(*e*) The point from which the spasm always starts is formed, now by the muscles at the moment immediately engaged in the movements (i.e., of the articulatory organs), now by the muscles immediately engaged in them (i.e., of the vocal apparatus and respiration). The symptoms of the attack, and the succession of the different phenomena, vary considerably, according to the starting-point and the centre of the spasm, as it were.

'(*f*) The *motif or stimulus* which induces the spasm is formed by movements of speaking which either have already started or are only intended, so that in some

cases the mere intention to speak already brings on the spasm.'

Thus stammering is shown by Ssikorski to be a sudden disturbance of the continuity of articulation caused by a spasm which, in a part of the speech-apparatus, appears as a physiologic entity.

2. These spasms—the primary phenomena—have to be distinguished carefully from secondary ones; it is further necessary to ascertain the connexion and genetic succession of both kinds, if we want to recognize the pathological symptoms correctly.

3. It must be taken into account that stammering manifests itself more or less differently in each case; certain symptoms disappear or become much less conspicuous, while others impress themselves on the observer more strongly; others, again, appear to be quite unusual, and some symptoms manifest themselves only under extraordinary conditions.

4. Respiratory spasms must be particularly noticed which comprise a complicated and manifold group of phenomena—viz.:

I. Inspiratory Spasms *

> The patient, previous to the pronunciation of a word, sometimes in the middle of it, or even of a syllable of it (always at the wrong time), suddenly inhales, now more deeply, then more superficially, and now more intensely, then more feebly—even if the lungs are sufficiently filled with air.

On the basis of our own experiences we cannot agree

* Ssikorski, pp. 48–52.

with Bonnet and Ssikorski, who classify these contractions of the diaphragm as involuntary. The patient meets with resistance at the moment he attempts to speak after inhaling; involuntarily he repeats the movement of inspiration, but hastily and shortly, feeling that he has still air in his lungs; again he tries to speak, and again he fails; another dash—i.e., a renewed inspiratory movement —though no air, to speak of, is inhaled at all, nor can possibly be taken in; the thorax, filled to excess with air, expands; nevertheless, another attempt to inhale more air is made with the utmost effort and excessive contraction of the diaphragm, so that even the hypogastrium is drawn in. However, all efforts are in vain; the patient attempts to speak once more, but cannot produce a sound. Deep exhaustion, in the end, forces the unfortunate sufferer to give up further attempts for the time being. The primary difficulty is here undoubtedly a 'spasmodic state' in the articulatory region or in the larynx; the lungs work according to the patient's desire, but their movements are merely preparations for the initial effort to break a resistance felt in the larynx. The stammerer notices this resistance either shortly before he begins to speak or in the course of speaking, and spasmodic inspirations occur accordingly. It is obvious that they cannot be classified as 'involuntary spasms'; the only resemblance they have to a spasm is in the anxious haste with which they are enacted, especially when the inspiratory nerves are irritated by exaggerated effort and dread of speaking.

II. Expiratory Spasms *

These 'spasms' mostly show the same suddenness and 'jerky' violence as the 'inspiratory spasms,' and disturb the continual flow of speech by breaking into its regular succession of sounds. The expiratory spasm, as a rule, does not show itself at the outset, but comes on during the course of speaking; its entry is sharply marked by a sudden increase of expiration, which by no means arises from momentary want of articulatory power. The contraction of the abdominal muscles is mostly carried out so suddenly and strongly, that the patient bends forward to a certain extent, while the breath escapes with great tension, speed, and noise; in this way, the economy with which the expiratory air is used, whilst speaking, is largely and suddenly upset by the expiratory spasm; the latter expels both the whole respiratory quantity and the residual air. In severe cases of stammering the expiratory spasm is induced by the intention to speak, and sets up at the first attempt to open the mouth. The position in which the articulatory parts are met by the spasm remains unchanged during its whole duration; the expiratory spasm, similar to a catalepsy, fetters the articulatory organs in their momentary position, as it were, and the succession of the articulatory movements is actually stopped. The same applies to the vocal apparatus. The aspirating sound is more or less of a whispering nature, but never assumes a full or loud tone, the adductor muscles of the glottis never succeeding in entirely carrying out their function, owing to

* Ssikorski, pp. 67–78.

> the antagonism of their opponents. At the same time, the adductors of the glottis are able to approach the vocal cords so far that the expiratory air cannot escape so freely as when the stammerer does not make any attempts to speak. 'Three spheres are in mutual connexion during the expiratory spasm: The organs of articulation, the vocal apparatus, and the expiratory organs; their movements arise, grow, and decrease simultaneously, thus showing the character of conjugate movements.'

These complicated symptoms are called 'expiratory spasms' by Ssikorski. This term might lead to misconceptions; one would be inclined to think that the spasmodic expiration is the source, the centre, or the most important momentum of the phenomenon. This, however, is undoubtedly not the case; but all three spheres are seized by spasm at the same time. It would certainly meet the case better to term these symptoms as 'general spasms of speech,' or 'spasms in the three spheres of speech.' Here, again, the 'spasms' are, beyond all doubt, induced by psychic obstacles. Just as in the fairy-tale of 'The Sleeping Beauty,' by the magic power of the evil fairy, every activity is hampered in an instant (the arm of the cook who is going to box the scullion's ears is suddenly paralysed in the midst of this movement, and so on), the muscles of the vocal and articulatory apparatus are, by an *inner resistance*, at once made captive.

What proportion does hurry bear to these muscular contractions? Hurry tries to obliterate entirely all differences between sounds with quick and sounds with slow muscular movements, by accelerating all simultaneous slower movements to such an extent that they

become similar to those which have to be carried out quickly. Thus it damages the distinctness of pronunciation and causes the swallowing of sounds, leading to a contraction of sounds which, being unfamiliar to the tongue, are more difficult to pronounce (instead of 'accusation,' 'axation,' etc.). In short, it throws obstacles in the way for the tongue, which cause it to stumble. We call this faltering *hæsitatio sthenica*. Strictly speaking, such hesitation is merely a stoppage from awkwardness, from lack of readiness ; it is due to the same awkwardness which makes us hesitate over pronouncing an uncommon foreign word. Such stoppage is no actual stammering yet ; it only shows a certain likeness to it, inasmuch as the speaker suddenly grows dumb. This sudden silence strikes the observer so much the more because hitherto the words had flown from the speaker's mouth with great facility.

Haste and eagerness also promote the repetition of words. This, however, does not necessarily appertain to stammering—not, at any rate, in those cases in which the repetition is voluntary, as, for instance, when the speaker intends filling out a pause. But when this repetition is unconsciously—that is, involuntarily—induced, then it shows a morbid character, and can be termed 'stammering.' Even ordinary speakers automatically repeat the words last uttered, if they are in doubt as to how to continue. They are more inclined to be stopped by such doubts when they are impressed by the importance of the listeners. The eager thinking of what is to follow induces them to pay much less heed to what is flowing from their lips at the moment. The previous thoughts not being uttered are, however, still so vivid, and the nerve-channels used for them are still stimulated to such an extent, that those thoughts

automatically crowd forward again, and the nerve-channels begin to work mechanically when stimulated once more from outside. This applies especially to those nerve-channels which had been irritated last—viz., those which innervated the last thoughts and the last words. While speaking those words, they themselves hear them, and those words irritate, from outside, exactly the same nerve-channels the stimulating of which, for the first time, had been caused by those words a moment before. Their own words induce a reaction ; it is a kind of ' echo-speech.'

The auditory stimulus of the word uttered by the speaker last, and thus also heard by him last, recalls that very word in the sound-image centre, in which it was alive but a moment before, and from here the motor is stimulated in the same manner as hitherto—that is to say, the word is spoken once more ; again the sensorium reacts on it, and again the centre of word-locomotion is set going, and so forth. The process is automatically repeated sometimes three, four, and even five times. Now, having become attentive, the speaker suppresses the automatic repetition by continuing energetically to speak with deliberation. This procedure is, therefore, based, on the one hand, on too great an excitability of the sensorium, and, on the other hand, on momentary inattentiveness. That the whole phenomenon is originally induced in the sensorium and not in the motorium—we call it *repetitio resonans*—is proved by the fact that in the speech-muscles nothing of a spasmodic nature is noticeable.

What we occasionally notice with ordinary speakers develops into a serious symptom in a stammerer, owing to his neurotic disposition. However, here spasms are missing, too. Ssikorski and others have tried to prove

that the cause of the 'repetitions' is to be found in a spasmodic respiration. The respiratory movements are supposed not to go together with articulation, thus producing speech with syllables and words spasmodically repeated, but without inducing spasms in tongue and lips. Ssikorski seems to believe that the syllable following the repetitions cannot be uttered, simply because the necessary breath is missing; owing to the respiratory spasms, only sufficient breath is produced merely to allow the utterance of the previous syllable. When, for instance, a stammerer pronounces the word 'analogy,' the respiratory movement, according to Ssikorski, suffices for 'ana,' but not for 'logy'; that is why the sufferer repeats 'Ana—ana—ana,' interrupting each 'ana' by a spasmodic inspiration, which does not admit of the pronunciation of the word being finished. That Ssikorski explains the proceeding in this way follows from all that he puts forward, which is based on Sievers' phonetics—namely, that each syllable requires an expiratory movement exactly measured. However, nobody will be inclined to believe that an equivalent quantity of breath which produces 'ana' would not be sufficient to utter 'logy.' No doubt Ssikorski has described the symptoms excellently, but we cannot fall in with their interpretation.

The stammerer evidently hesitates to pronounce the sounds following the repeated syllables; he does not dare to produce the syllable 'lo'; undoubtedly he dreads to pronounce it. He starts and breaks off, starts and breaks off again, and so forth. We admit that this starting and breaking off displays an alternation between slight ex- and in-spirations; however, he is certainly not prevented from pronouncing the following syllable 'lo' because his breath is spasmodically inter-

mitted or would not suffice, but he retains his breath because he thinks that he *cannot* pronounce the syllable 'lo' at the moment. The unfortunate stammerer's whole attention is anxiously focused on that syllable, while his speech-apparatus is automatically working, repeating the previous syllable without thinking: 'Ana—ana—ana.' So long as these syllables are following each other in very small equal intervals, like the single strokes of a clock, we undoubtedly have to deal with that echo-repetition; when, however, the repetitions show increasing hesitations, and do not exactly resemble each other, we have to deal with conscious repetitions. Occasionally automatic repetitions are followed up by conscious ones—namely, the sufferer tries sometimes to delay the moment at which he has to utter the dangerous syllable as much as possible by repeating the previous one (*repetitio syllabarum asthenica*). Those who know this trick will discern this repetition (due to dread) by the fact that a word or a syllable is, in all its details, not the exact image of its predecessor, but that the pitch changes, the last syllable being elongated, and so on. The stammerer waits for the favourable moment to jump over the next syllable by the aid of the sound of the repeated word. Naturally, these repetitions cannot be counted as actual stammering; they belong to those numerous helps which a stammerer applies to combat his impediment. It is different with the echo-repetitions; these are only noticed subsequently by the stammerer—i.e., after they have occurred once, twice, or even three times. Often they escape his notice entirely, so that he is surprised at being told by the listener that he has repeated a word or a syllable. This is not to be wondered at, as the stammerer's attention is already concentrated on the following word, whether it usually causes him

difficulties, or whether it occupies a prominent place in the sentence. This looking ahead is particularly pronounced when the sufferer has to read aloud; anxiously his eyes hurry on in advance to espy a possible enemy amongst the approaching words. But not only when reading is his attention on the *qui vive*, but when speaking also. This tendency to anticipate difficulties is the chief feature in all forms of stammering, and has become deeply rooted by the fact that the patient is continually afraid of being taken unawares by inner (psychic) obstacles frequently cropping up without the slightest warning.

We will now turn to the main source of all paroxysms of stammering—viz., dread. Characteristic with this emotion is the patient's incapacity to keep his limbs still—arms, legs, jaws, etc., move tremblingly to and fro. To judge from appearances, the irritation caused by dread influences the normal innervation to such an extent that now this and now that group of muscles is seized with slight thrills. By vigorously tightening the muscles it is possible to assuage this trembling somewhat, but it is not practicable to suppress it entirely —nay, it seems as if each of these attempts at suppression develops the small, quick waves of trembling into larger, slower billows. In so far as these irritations of dread influence the motorium, they resemble the influence of alarm. However, whereas the latter approaches suddenly and intensely, and vanishes as quickly as it appeared, dread dissolves in numerous, small irritations rapidly succeeding each other, and lasts for a longer time, upsetting both the motor and sensorial nerves, and disturbing their functions. Alarm resembles a powerful troop of horses rushing forward like lightning; the irritations of dread, on the other hand, slink about in

the territory of the nerves like treacherous guerillas, sallying forth for some time, now here, now there. The retardations (*major* and *minor*) and acceleration last much longer than is the case with the irritation of alarm, as the single irritations continue their harmful game for some time, and the influence of the will is consequently debilitated by anelectrotonus for the same period. The waves of dread, by the way, follow each other much more quickly than the convulsions of the limbs may make us presume. The convulsions only occur if a nerve and its counterpart be not reached simultaneously by an elevation of a wave or a depression between two waves, but one by an elevation, the other by a depression. Each wave corresponds to an irritation of the nerve; when these irritations follow each other so quickly that sixteen to eighteen in a second reach the nerve, *retardatio asthenica* degenerates into *hœsitatio asthenica*, or *tetanus asthenicus*.

Slighter degrees of dread are frequently found with children—namely, embarrassment, confusion, and similar asthenic emotions.

The irritability caused by dread can visit any nerve connected with the process of speaking; each nerve is therefore able, under the influence of eagerness and dread, to induce one of the accelerations (*sthenica* or *asthenica*), and one of the retardations (*minor* or *major*) of its organ. Therefore, with regard to accelerations and retardations, twice as many forms of stammering can appear as there are speech-nerves or speech-muscles; combinations are possible, too, which still augment the number of varieties.

Ssikorski confirms our observations by saying: ' The phenomena of stammering are so diversified and complicated that, in dealing with this neurosis, the question involuntarily crowds into the mind whether these

phenomena represent one distinct malady or different forms of illness combined in a group, owing to insufficient analysis of the symptoms. The outer form of the malady is so polymorphous that (at first glance) it seems impossible to group the different cases and to compare them with each other.

We will now continue our criticism on Ssikorski's expositions. He calls those muscular contractions 'spasms.' However, if they were actual spasms, they would not cease at the same moment as the will to speak is suspended; further, if they were based on real spasms, nobody would be able to imitate, for the purpose of amusement, the paroxysms of stammering so strikingly as is often done.

Ssikorski points out that there is no lack of articulation; the process actually commences; the articulatory organs, however, persevere exactly in the same position in which they were taken unawares by the setting in of the 'expiratory spasm.' 'Strictly speaking,' he adds, 'it is merely a stoppage.' He does not here mention the word 'spasm,' and such it undoubtedly is not. The sufferer, full of expectation, keeps the outer organs in a correspondingly distressed position to that of the vocal cords. He hears that the vowel will not sound. As soon as the vocal cords approach each other, the position of the articulatory organs changes also; but not exactly as would have been the case if speaking had not been impeded. And this cannot be wondered at if we consider the unfortunate stammerer's frame of mind at the moment! He is quite satisfied if he succeed in uttering the word at all; whether the word 'hand' is correctly articulated, or whether he says something more like 'h-ond,' he hopes no one will blame him for it.

With the 'expiratory spasm' it is, therefore, only

the muscles of the vocal cords which are withdrawn from the stammerer's free will; whereas the stopping of the articulatory organs,* as well as the intensifying of the abdominal muscular pressure (the latter had already been realized by Becquerel and Merkel) are solely actions of the will. This phenomenon cannot be termed ' expiratory spasm ' as matters stand.

III. Rhythmic Spasm of Respiration,† Combination of Inspiratory and Expiratory Spasm

Before and during the act of speaking the breath goes in and out several times without producing sound. The intention to speak exists. Expiration is interrupted, continued, followed up by inspiration, then again an expiration, and so forth, without a distinct norm. The spasms seem, to a certain extent, to be subjected to the influence of the will. The patient appears to be, for the moment, a helpless and quite undetermined man. The respiratory phenomena are frequently the preliminary symptoms of intense spasms. With the respiratory spasm the listener mostly hears nothing but breathing noises, instead of articulatory sounds; it is very seldom that sounds are actually produced which are repeated as often as inspiration and expiration take place. Continuous sounds, like *f* and *s*, can often be heard pretty distinctly, whilst explosives, like *p* and *t*, are not frequently formed, but are rather like the continuous sounds corresponding to them.

* He can move them at will. † Ssikorski, pp. 78–87.

This description alone proves that the 'articulatory spasms,' as partly admitted by Ssikorski himself, are voluntary actions. As a matter of fact, the patient dreads uttering the next word in the sentence, and actually serious 'spasms' mostly break out when he ventures to approach pronunciation; it is only with more or less difficulty and indistinctness that he ultimately squeezes out the word. That dread of speaking makes him waver and hesitate; he will begin; the next moment, however, he gives up his intention; again he plucks up courage, and again he loses heart, thus helplessly vacillating between resolution and dread, between dread and resolution. This vacillation in his soul is most clearly reflected in his respiration. The centre of this form of stammering is undoubtedly *not* the respiratory organs, but some part of the phonetic apparatus, the innervation of which stands under the paralysing influence of dread of speaking. The term 'respiratory spasms' has, therefore, to be avoided.

IV. Spasm of the Glottis *

With each endeavour to speak, a spasmodic closure of the glottis takes place. The vocal cords do not simply touch each other, as is the case when formation of sound is normal, but they join tightly together. In this way the expiratory air finds the exit barricaded, and this barring of the gate puts an end to the production of voice and articulatory sounds for the whole duration of the spasm. Thus an unexpected pause, a sudden temporary dumbness,

* Ssikorski, pp. 89–105.

ensues in the midst of an even, uninterrupted succession of sounds. The pause does not only occur between two syllables, but may occur also in the middle of a syllable, nay, even during the production of single sounds, causing the dismembering of syllables and sounds so frequent with stammering. The duration of the spasm varies sometimes considerably. Whilst the listener's ear can very easily notice the spasm of the glottis, it is less apparent to the eye. The lack of visible changes keeps the inexperienced observer entirely in the dark about the seat and cause of this disturbance. In most cases the spasm is caused during speaking ; in severe cases, however, the mere intention to speak is sufficient to close the glottis. Very frequently the spasm is first caused by the endeavour to pronounce a vowel or an *h*, and, as a rule, the spasm precedes the vowel sound. When the impediment is developed and deeply rooted, the spasms even occur, if no contraction of the glottis take place, according to the postulates of articulation and vocalization. The glottis closes so completely that not even the smallest fraction of breath breaks forth ; a mirror held in front of the stammerer's mouth will convince any one of this fact. Only the adductors of the glottis are contracted, the tensores of the vocal cords are not. Owing to the eager action of the abdominal muscular pressure, the air retained in the inner aerial ducts is pushed against the larynx ; the latter is thus moved upwards, sinking, however, as soon as the abdominal pressure decreases. Consequently, the muscles destined to fix the larynx either do not resist at all, or only resist this shifting in an insufficient way. The closure of the glottis is, therefore, the only active

proceeding in the domain of the muscles of larynx and throat. In the articulatory region there is nothing of a spasmodic nature noticeable. By the barring of the air and the tremendous tension of the abdominal pressure—the unfortunate sufferer endeavouring to burst open the lock by force and concentrating all his attention on this point—the blood in his face, eyes, and jugular veins is accumulated, causing the symptom of cyanosis. Many stammerers remain cool so far that the listener can only estimate the inner struggle from the sudden loss of voice and the cyanosis of the face. Sometimes the patients are under the impression that the spasm is subsiding; but when they try to continue speaking the spasm increases anew. The action of articulation does not cease. If the individual, at the moment the spasm of the glottis sets in, wishes to utter a *u*, his lips are rounding and pointing for the *u*-tube; these movements, however, are carried out slowly. The stammerer fairly often repeats them several times, and each time the abdominal pressure is increased. The hollow, short, and more or less indistinct sound which occasionally escapes the glottis, just before its closure, appears so much less like the actual vowel sound the sooner the glottis closes. The articulatory organs, though on the way to the correct position, are still far from it.

All these observations of Ssikorski are, up to the smallest detail, extraordinarily correct, and the whole description represents an excellent picture of this form of stammering. The explanation of the phenomena is also correct, to a certain extent, inasmuch as it discerns the seat of the serious trouble in the muscles of the

glottis, and deduces the other phenomena from the circumstance that the muscles of the adductors of the glottis are excessively contracted.

However, he makes no reply to several important questions, namely :

1. Why does the ' spasm ' set in *before* the beginning of the articulatory and expiratory movements which, surely, are innervated with it at the same time ?

2. Why does the ' spasm ' set in, in difficult cases, even when the adductors of the glottis are not in action at all at the moment ?

3. Why does the ' spasm ' get the start of the articulatory and expiratory organs now more, now less ; why does it not always run in advance equally ?

In the next chapter but one we shall show that our conception of the phenomena is able to throw light on all these questions. For the present we will only point out that a ' spasm ' is entirely a misapplication, as the closure of the glottis ceases instantaneously when the stammerer gives up his intention to speak.

V. Vowel Spasm

Under this term Ssikorski * has classed two forms of stammering which, in our opinion, are quite different as to their derivation :

1. *Compressed Breath Voice*

The voice, in spite of the greatest effort, cannot be brought into the correct position ; it is like

* Ssikorski, pp. 105–119.

whispering—compressed and hollow, or it sounds suppressed—as if it came from a longer distance than from the larynx. Often abnormally deep, it sometimes appears normal, to a certain extent, though its production invariably makes the impression of an extremely troublesome and straining process, as though the vocal muscles had to surmount serious obstacles. All muscles of the throat which govern the larynx, further, the muscles of the hyoid bone, which, on their part, form the *punctum fixum* of the larynx, and finally the inner muscles of the larynx, show extraordinarily violent contractions. Articulatory movements, though retarded, alternate with each other.

2. *Spasmodic Voice*

The vocal apparatus perseveres in one and the same position for an abnormally long time. The result is an unusually long duration of the vowel sounds, to be found mostly with children (between three and five years of age) who just begin to stammer. Articulation is completely interrupted, the mouth channel stiffening in the vowel position. Respiration is not disturbed.

The form of stammering described under Division 1 has its seat—here we agree with Ssikorski—in the muscles of the larynx. The vocal cords will not relinquish their position of rest. The muscles by which they are kept in that position are contracted against the speaker's will. Evidently, under the influence of dread, one of the two retardations sets in, either *major* or *minor*—preferably

the latter. Whilst the glottis should quickly grow narrower, this movement is extremely aggravated and retarded by the appearance of dread. As a matter of fact, the adductors of the vocal cords would not succeed in breaking the resistance of their counterparts unless they were strongly supported by all the muscles of the larynx which take part in the production of sound. Nevertheless, the vocal cords are only approximately brought into the corresponding position. As all those organs are contracted to the utmost, in order to force the glottal ligaments into a somewhat satisfactory position, the voice acquires an unusual tone—compressed, hollow, dull, whispering. When dread is very intense, the sufferer does not succeed at all in narrowing the glottis ; the breath enters and goes unhindered, and the stammerer is unable to get hold of the vowel. If the case be easier, the patient may succeed in forming *h ;* occasionally a vowel is joined which is comparatively clear, provided that the stammerer only contracts sharply the adductors of the glottis in order to overcome the abductor muscles of the glottis. However, when he introduces the other muscles into the struggle, the tone, thus formed abnormally, sounds more or less imperfect, dull, and hollow. We are inclined to think that this phenomenon occurs of itself, when all organs engaged in voice production are hampered in their movements—i.e., *retardatio minor.* Under the impression of dread, the whole speech-mechanism naturally works clumsily, so that the harmony of the movements is more or less disturbed. Not only all organs of the larynx work incompletely and laboriously, but also all movements of the articulatory apparatus are depressed, clumsy, and slow. The sufferer feels as if hundredweights were attached to all his organs of speech. No wonder that muscles and their counterparts are,

under the pressure of dread of speaking, intensely tightened.

As to Division 2—spasmodic voice—Ssikorski considers the seat of this symptom to be also in the muscles of the larynx. In our opinion, however, the larynx works quite normally. The organs take up the right position without exertion and without overstepping the mark—that is to say, neither the abductor nor the adductor of the glottis are morbidly stimulated in the least. We agree, however, with what Ssikorski says with regard to articulation: 'The articulatory mechanism stiffens at the moment that it enters into the vowel position.' The little sufferer—it is mostly children who are attacked by this form of stammering—does not succeed in going from the articulatory position for *o* in 'Sophia' into that for *ph*. This transition causes him difficulty; it seems as if it were unfavourable to this particular child. From the position of rest, the child would perhaps be able to enter into the *ph*-position, but he cannot manage the transition from the articulation of *o* to that of *ph*. The counterpart of that muscle, which should act in due course, is evidently irritable, and works, under the influence of embarrassment, more intensely than it ought to do, so that the required movement can be carried out but slowly, if at all; during that time the vowel sound continues to be produced quite clearly until the articulatory movement again proceeds. At first a child suffers from the difficulty of forming intelligible sounds through embarrassment only; later on, however, the suffering is increased by dread of speaking and the fear of 'bugbear' letters and words making their appearance. This dread may lay hold of the sufferer to such an extent that he is utterly unable to proceed until the emotion has subsided.

The explanation which Ssikorski gives of the phe-

nomenon dealt with under the next head, is certainly at fault.

VI. Intermittent Vowel Spasm *

Speech is, for a short time, interrupted by a tremulous sound, similar to the bleating of a sheep or a goat, or to a light spasmodic cough, or to other noises the character of which cannot easily be described in words; sometimes the patient is for several minutes unable to utter a single word, and only produces a long series of inarticulate sounds (compared by Ssikorski with the 'mute voice'). The sounds have nothing in common with the vowel which has to be pronounced. The cavity of the mouth has now this, now that shape. The patient at that moment does not articulate at all. In this way the spasm we are speaking of distinguishes itself from all other spasms of stammering. The 'mute voice' is, with this form of stammering, the result of a series of spasmodic shuttings and openings of the larynx which are entirely involuntary and operate in quick turns. The other form—the tremulous voice—is induced by the vocalization undergoing some modifications with each tremolo; each time the *arytenoid cartilages* move backwards, to a certain extent, while the epiglottis moves forward a little, and the aperture of the larynx widens. Each stammerer has his favourite sound. There are two categories: (1) Loud sounds or noises; the vocal cords, in this case, are nearly in position for speech. (2) Whispering

* Ssikorski, pp. 119–129.

voice; here the vocal cords are absolutely in correct position, the muscles of the throat, which are engaged in the act of speaking or whispering, alone being contracted.

Now, if these phenomena may be called 'spasms,' we are entitled to say that any one suffers from 'intermittent vowel spasm' who at the moment, immediately before or whilst speaking, clears his throat or interlards his speech with a frequent 'er . . .' We do not think that Ssikorski himself would maintain this point when pushed to such an extent. He must not speak, then, of an 'intermittent vowel spasm'; for expedients which are occasionally used by ordinary speakers to get over any unevenness of their speech are simply used in an aggravated manner by a stammerer. When unable to continue speaking, particularly when the vocal cords refuse to react on stimuli coming from the word-image centre, he, after cautiously opening the glottis to a small extent, makes a breath of air pass it, with the result that a humming or a bleating, etc., is produced; or he allows the vocal cords to go back to the position for whispering, and then sends a breath of air through them. Undoubtedly, it is not his intention to speak at that moment, as he does not articulate at all; he only wishes to make his refractory vocal cords ready for speech, like a musician who tunes his instrument before the concert begins. He does not innervate the muscles of the larynx from the word-image centre, but from the motorium; he, at first, keeps them in the position in which they refuse to obey, and then, testing them cautiously, he allows them to leave this constrained position more or less, with the intention of sending a breath of air through. However, when he

tries once more to play the vocal instrument which he has thus tested—that is to say, when he wants to stimulate the muscles from the word-image centre (from the *a*, *e*, *i*, *o*, *u*-image), his nerves work just as incorrectly as before; he is again unable to form these vowels, except he be either less eager or less 'funky' than previously.

In short, this form of difficulty which, according to Ssikorski, is based on 'spasm,' is from the beginning to the end a purely arbitrary act of the stammerer, caused by refractoriness of the vocal organs brought about by psychic resistances.

VII. Spasm of the Soft Palate*

Preliminary: The opening which combines the channel of the mouth with that of the nose, is during the process of speaking, mostly shut by the soft palate. It is only opened with the so-called nasal letters *m* and *n*; with *m* the lips are closed at the same time, whereas with *n* they are opened; a closure of the mouth-channel, however, is brought about by the tongue being tightly placed against the teeth. Both sounds do not obtain their full character until these closures open, except if they follow directly upon a vowel.

1. The sounds, which have come in their turn, suddenly intermit, and the patient, in accordance with the temporary position of his lips and tongue, utters spasmodically such sounds as 'pm-pm-pm,' 'tn-tn-tn,' or 'kn-kn-kn.' The main substance of

* Ssikorski, pp. 138–142.

this symptom is evidently caused by the *posterior nares* closing and reopening, thus causing a series of explosions of the soft palate. Here also, as was the case with the 'intermittent vowel spasm,' articulation is interrupted, and, instead, the position for *p*, *t*, or *k* (this closure is not spasmodic) is formed, sometimes with and sometimes without voice. Now the glottis is in position for speech, now it is opened ; in the latter case the noise produced reminds one of sneezing, snoring, etc.

2. As in the latter case the nasal channel closes and uncloses, so also in the following case ; here, however, this movement occurs only once, whereas it is repeated several times with the 'pm-pm-pm' sounds. A child, for example, has to say 'shady,' but says instead 'sh-n-ady' ; instead of 'effort,' 'effm-ort' ; instead of 'clover,' 'clovm-er' ; instead of 'Lissa,' 'Lissn-a' ; instead of 'sanus,' 'sn-anus.' The closure of the nasal channel, caused by the consonant or vowel, is followed up by the opposite effect, so that an *m* or an *n* resounds ; as a matter of fact, the nasal channel ought to have remained closed.

In both cases we notice that articulation—as is the case with the 'intermittent vowel spasm'—is interrupted, and, instead of the sounds to be uttered, sometimes quite strange and odd ones are produced. This indicates that the patient, at the moment, does not want to speak at all. The openings of the nasal channel, to which both the repeated 'pm-pm-pm,' etc., and the *m* or *n* happening but once are due, are movements carried out consciously, to clear away an obstacle whilst speaking. This is particularly striking with the

examples specially given. The inner resistances evidently do not allow the stammerer now to enter into the vowel, now to get out of it, and the combination of vowels with the letters *f*, *v*, *s* causes him difficulties. He tries to overcome them by opening the nasal channel; the *m* or *n* thus produced naturally induces the low resonance of the vocal cords, and facilitates the pronunciation of the following vowel, and, on the other hand, the *m* sounding but slightly leads again out of the vocalization gradually.

VIII. Spasm of the Closure of the Lips*

The spasm of the *musculus orbicularis oris* will be recognized as being one of the most frequent symptoms of stammering; it can mostly be distinguished without difficulty by the closing and the pressing together of the lips; sometimes the lips even take on the shape of a tube, which is quite visible to the observer. In most cases the degree of closure is considerable. The spasm is confined to the muscle which closes the mouth. The disturbances brought about by such spasm first of all concern all sounds in the formation of which the lips take a principal part (*b*, *p*, *m*, *f*, *v*). In accordance with the intensity of the spasm three cases can be distinguished:

1. *Occlusio spasmodica:* a very violent attack; the lips remain closed for a shorter or a longer period; articulation is interrupted, thereby causing an abnormally long soundless pause, 'momentary dumbness.' The spasm, as a rule, lasts several

* Ssikorski, pp. 143–151.

seconds (with *b*, *p*, *m*) ; at any rate, it is considerably longer than intervals occurring when speaking normally. If the spasm arise when intonating the sounds *v* and *f*, the latter either intermit entirely, or they are changed to a very short aspiration preceding the closure of the lips. In most severe cases the spasm is not only induced by labials, but also by other letters, such as *d*, *t*, *c*. The mere intention to speak is often sufficient to produce the spasm of the lips. Together with the increased tension of the muscle closing the aperture of the lips, energetic expirations take place which are more intense than those in connexion with the respiratory spasms. The vocal, and particularly the respiratory, apparatus remain intact.

2. *Explosio spasmodica :* a less intense attack ; the aperture is forced open when the tension of the breath has reached a certain degree. Like an explosion the breath escapes, thus producing a *b* or a *p*. Since part of the expired air is wasted and the retained air has lost its elasticity, the spasm of the lips, unless it has come to an end, once more gets the upper hand, compelling the lips to shut again. Immediately the tension of the expiratory air increases again, forcing the lips asunder, and so forth. Thus a series of repetitions of the same letters, following each other in more or less quick succession, is produced, which continues to express itself until the spasm has subsided. Possibly the action of the counterparts also plays a rôle. The weaker the spasm, the more frequent the explosions.

3. *Spiratio spasmodica :* a still slighter attack ; the utterance of the continual sounds *m*, *f*, *v*.

The lips do not quite close, but persevere spas-

modically in the position previously adopted. The intonated sound continues with unconquerable power as long as the spasm itself continues. The sounds thus produced are not clear by a long way.

During the spasm, the sufferer makes more or less pronounced movements which are intended to form the transition into the next formation of sound. If his disposition be very intense, the spasm of the lips occurs with each articulatory movement in which the lips take part, even when pronouncing a vowel. For example, the patient wants to say 'comet.' When he attempts to form *c*, the lips close and open after the spasm has subsided, so that a *p* is heard before the word, 'p-comet'; instead of 'Odessa,' 'O-b-b-b-dessa.' The *o* is followed up by the lips closing, opening, again closing, opening, and so forth. The syllables 'dessa' do not join until the spasm has ceased.

Here, again, Ssikorski made the mistake of putting down these phenomena to 'spasms,' while they are really due to haste and dread, frequently intensified by anticipation. When an impulse of the will is transferred to an irritable nerve, haste and dread have an accelerating influence. Owing to this influence, the lips are pressed together too tightly for *b* or *p* to be articulated (*acceleratio sthenica* or *asthenica cum productione motuum*).

When, however, in order to open the *b* or *p* lock, the will innervates the muscles which open the mouth, dread has the effect of retarding the movement (*retardatio asthenica major cum abbreviatione motuum*). When emotion is intense the mouth remains entirely shut—nay, with each increase of excitement or dread it

may be shut more tightly than ever—but, in any case, the lips will open comparatively slowly.

The lips, by the way, are rigid in very severe cases only; in somewhat slighter forms of excitement and dread a trembling movement is noticeable in the lips, which has been compared by Gutzmann with the mumbling of rabbits. This trembling of the lips alone is sufficient to disclose the cause of this form of stammering, as it involuntarily reminds us of the trembling of our limbs when dread overtakes us. In fact, we have before us a *retardatio*, even a *hæsitatio asthenica*, which is a product of dread. The attention becomes riveted on articulation, and directs the waves of dread to the organs of speech, just as the writer, who is afflicted with writer's cramp, has all his attention concentrated on his movements, and his excitement produces tremor in the irritable nerves of his hand. Now the sphincters, now their counterparts, are seized by the emotional influences. The will attempts to come to the rescue, but is weakened by anelectrotonus and inner resistances (psychic conflicts play an important part with writer's cramp), and all efforts are of no avail.

The question may be asked, however: Is there no possibility of assisting the will to gain the victory in spite of dread being at work? Judge for yourself.

The series of ganglions and nerves which stimulate the contractor is irritated by dread as intensely as that which innervates the detractor. The more the irritation of dread increases, the more tightly both muscles contract. Now, should it not be possible to force one series of ganglions and nerves, by stimuli of the will, to work so that the counterpart is detracted, in spite of all opposition of dread? If only the stimulus of the will could take effect! The acoustic nerves send stimulus

after stimulus to the equally contracted fighting parties, but, unfortunately, none of these reinforcements can reach them. The upper parts of those nerve-channels, especially those in which the motor ganglions are situated, are visited by anelectrotonus, and are practically impassable to stimuli of the will, owing to the continually trembling and quickly alternating currents of dread, which cause *retardatio* and even *hœsitatio* (*tetanus*) in both series of ganglions. It is only occasionally that a single stimulus, when dread is less, sneaks to its party, helping it to obtain an insignificant success; however, when dread is more intense, no stimulus of the will can wedge its way through. The single particles of the nerves are somewhat separated by the currents of dread, so that no stimulus of the will can leap over these gaps which, though very small indeed, are too wide for it. The upper parts of the nerves, when seized by anelectrotonus, conduct no stimuli of the will.

What would happen if the stimuli of the will, owing to such strong pressure of volition as even to be painful, should succeed in crossing those gaps? If all organs, equally excitable, are also equally attacked by the retardation of dread, they continue to work equally, though very slowly. If, however, the organs are unequally irritable, the increase of the pressure of volition would be of no avail. If, for example, the articulatory organs are more irritable than the vocal organs—the former being seized by violent, the latter by weaker, retardation—such an increase of the pressure of volition would suit the articulatory organs, but would be far too strong for the vocal organs. The vocal cords would, therefore, close tightly, and speaking would be quite impossible.

If there are such abnormal conditions in the ganglions and the more frequently used nerve-channels, the patient is helpless for the moment. Even if the pitiable stammerer, before the critical moment, had repeated the bugbear words to himself a thousand times, and even if these repetitions had been done with physiological consciousness, when dread sets in all these exercises are absolutely futile.

The only thing that sometimes helps him is a change of innervation, such as a different pronunciation of the words, a change of the timbre, raising or lowering of the voice—in short, anything that is connected with the quality of sound. The question might be raised: Does this altered innervation arrive at the muscle at all, or is it also kept back by the dread anelectrotonus? Now, this change of innervation, of course, proceeds from the sound-image centre; another pronunciation of the words, an alteration of the timbre, etc., has first to be thought of silently by the stammerer. The more the altered pronunciation differs from the customary, the more it attracts the sufferer's attention; he, therefore, does momentarily forget his incapacity to speak. His dread is not directed to his next movements of speech, thanks to the helpful stimulus of the novelty; the anelectrotonus and, with it, the irritability of the nerves subside, with the result that the stimuli of the will can now arrive at their destination without hindrance. This is the reason why elocutionists and 'speech specialists' *temporarily* obtain striking results with their methods, which frequently deviate considerably from the customary manner of speaking.

The 'spasm of the upper lip, nether lip, and of the corners of the mouth,' are such rare forms of stammering

that we need not discuss them ; they influence speaking but very little. More frequent, however, is—

IX. The Spasmodic Opening of the Mouth (Os Quadratum)

which manifests itself in two forms :

1. The jaws are closed, only the teeth are bare. The muscles which open the mouth are intensely contracted, while the countenance becomes strange and woeful ; the opening of the mouth is drawn asunder as though by a strange power, and the stammerer appears more helpless than is the case with other paroxysms of stammering. The muscles which raise the upper lip and the corners of the mouth contract violently, giving the mouth a quadrangular form, reminding one of an animal showing its teeth. This spasm is mostly tonic, and often keeps the mouth in this singular position for some seconds. On this general spasmodic basis, as it were, single spasmodic waves make their appearance in the shape of clonic convulsions in single muscles, or bundles of muscles. The picture thus becomes extremely multicoloured, the single muscles and their groups seeming to wrestle with each other.

2. In addition, the mouth is widely opened, while the lower jaw sinks down.

Articulation is mostly rendered impossible by the spasm ; undefinable sounds of a vocal character are sometimes produced.

The *os quadratum* is invariably the result of dread, which suddenly attacks the stammerer at the moment he has opened his mouth—that is to say, while speaking.

The *musculus orbicularis oris* does not succeed in closing the mouth, until a very great effort has been made.

Finally, as to the 'spasms of the tongue,' practically the same causes and effects as we have alleged concerning the 'spasm' of the lips apply here also. With the 'spasm of the protrusive tongue' the latter is extended, grows stiff in this position, extending more or less beyond the rows of the teeth, and protruding outside, to a greater or lesser degree. Whether this form of stammering is independent or is merely an outcome of the throat being choked, we should not like to decide. In several cases under our observation the phenomenon seemed to represent a special form of stammering by itself, while in a few other cases we were under the impression that it was merely a conscious movement, by means of which the patients believed themselves to be able to 'clear the throat.' The paroxysms of stammering often resemble voluntary contractions to such an extent that the patient alone can enlighten the observer as to whether a contraction is conscious or is unconscious, and merely the automatic outcome of dread and psychic resistances. The same applies even more strongly to the so-called co-movements. These can be explained correctly by none but the stammerer himself. He alone can know whether this or that movement of an arm or leg, this or that facial contortion, is intended to help him in his desperate struggle with his refractory muscles, or whether they are induced by inner resistances, on the one hand, and the enormous pressure of volition, on the other, by the aid of which he tries to force his disobedient organs of speech to work. In some cases even the patient himself is not able satisfactorily to explain the origin of those co-movements.

Some movements are undoubtedly apt to aid speech,

such as gestures of the right arm. The movements of speech, as well as those of the right arm, are innervated from the left side of the brain. Movements of the right arm facilitate speaking, as speaking, on the other hand, involuntarily furthers movements of the right arm. Very likely the same applies to the stamping of the right foot, by which energetic, angry words are sometimes accompanied. Intense innervation of one sphere aids and furthers, by irradiation, an innervation of the sphere adjoining in the brain.

We will renounce the practically futile discussion of the co-movements. We may mention, however, that Gutzmann,* in a way worthy of acknowledgment, has given a tabulated classification of some co-movements, from which we will here quote one interesting case :

' The patient was a railway official, and had stammered, in a slight degree, from boyhood. After a railway accident his impediment began to increase in a remarkable way. Before long the man was scarcely able to speak at all. At each attempt to speak he involuntarily wriggled about, and was only able now and then to squeeze out a syllable or a word by a vigorous jump forwards. Nobody—not even his own relatives—at first thought of putting his strange behaviour down to stammering. He was supposed to have lost his reason, and was ultimately taken to the lunatic asylum of the Royal Charité in Berlin. It was not until after several weeks' treatment here that Professor Westphal diagnosed the suffering as an extremely severe form of stammering. As generally known, the impediment considerably increases when the patient is in a state of psychic emotion. Now, when Professor Westphal introduced this man to his students with the words, " Now, gentlemen, I will

* Gutzmann, ' Lectures,' pp. 116–119.

show you a highly interesting case, . . ." the wretched man, by his being characterized as " a highly interesting case," became so intensely excited that, at the attempt to insist on the Professor not applying the term " case " to his person, he jumped about in the room with his fists clenched, without being able to utter a single word.'

We will now briefly recapitulate the results of these investigations.

In the centre of stammering stands dread of speaking which, as momentum of inhibition, hampers the automatic process of the function. When dread causes the sensorium, particularly the word-image centre, to vibrate —which is especially the case when the stammerer's attention is directed to letters and words—the emotion easily transfers itself to those motor channels which have become more or less irritable through constant stimuli from the sensorium. The voluntary movements of these motor nerves are, consequently, intensely influenced by dread. If the nerve and its counterpart are equally irritable, both of them are equally influenced by dread, and *retardatio minor* is the result. As the proportion of forces working in both of them is now altered, the active nerve cannot innervate as quickly and with such result on the usual stimuli of the will as in times of calm. The organ stimulated by it moves more slowly and does not gain its end until the number of the stimuli of volition is increased. The tremor causes us to suppose that dread liberates single irritations in the motorium which follow each other very rapidly. If a motor nerve is struck in one second by sixteen stimuli of that description, the *retardatio* is turned into *tetanus*. This influence of dread is still intensified by psychic (largely unconscious) conflicts, which counteract the stimuli of the will. Thus it is still more possible that this *retardatio minor*, when

dread and psychic resistances are intense, is turned into *hæsitatio* or *tetanus*.

It is easily conceivable that the spacial momentum is also apt to aggravate the disturbances caused by the disastrous influences of dread and psychic conflicts. The organs of speech move within comparatively narrow compasses. How small is the cavity of the mouth, how small the larynx, how minute the glottis! Any *abbreviatio motuum*, and certainly any *productio motuum*, is bound to be accompanied by the worst consequences to these diminutive organs; when the glottis closes but a trifle too much, and also, when it falls short a little of the normal closure, speech is absolutely impossible.

We may, *en passant*, repeat here that writer's cramp is due to the same influences as those to which stammering is attributed—viz., psychic conflicts and dread. That exactly the same inner resistances which interfere with the normal innervation of speech are at work in the case of a person suffering from writer's cramp is proved by the fact that—as stated by Naumann *—those stammerers who, at the same time, suffer from writer's cramp are not able to write the very words over which their organs of speech break down.

Anything that augments psychic conflicts and irritability also enlarges the basis of stammering, and, consequently, the intensity and frequency of the paroxysms. Everything that causes dread, haste, and eagerness has the same effect. In this psychic domain only a stammerer can be quite at home. It is impossible for a non-stammerer to find his way about in this labyrinth, unless he be guided by the sufferer after each attack.

The number of the momenta which increase or decrease

* A. Naumann, 'Der Schreibkrampf,' Graz, 1892.

the stammerer's dread is legion. We can only pick out the principal ones :

1. Beginning of a sentence. The stammerer sees the whole of the long sentence before him. He will be obliged to say all that ! The more he advances while speaking or reading, the more his task and his dread diminish. This is one of the reasons why stammering is particularly conspicuous at the beginning of a sentence. A further difficulty is to bring the organs out of their position of rest. As a rule, it is easier to get from one word to another than to start speaking. The main reason is that, at the beginning of a sentence, the encouraging acoustic help of the previous word is missing.

2. Sounds, syllables, and words at which the patient has already stammered frequently increase his dread, if he notice them beforehand. When speaking, and especially when reading, he anxiously looks ahead, until he espies such a ' bugbear.' Then his general dread of speaking increases, sometimes causing him to get stuck long before he comes to the terrifying word. Nearly every stammerer has his own particular and personal bugbear letters and words.

3. Each stammerer makes use of certain expedients which he has devised to help him over an attack. Some of these shifts would appear to an ordinary speaker almost insane, or, at any rate, very odd and inappropriate ; for example—

(*a*) Many of the co-movements.

(*b*) The writing down of the words to be spoken, so that, in case of need, the stammerer may be able to show the note in a shop, booking-office, etc.

(*c*) The pointing at the objects he wishes to designate.

(*d*) The altering of the arrangement of words in a sentence.

(*e*) The substitution of an 'easy' word instead of a 'difficult' one.

(*f*) The insertion of redundant words and phrases, such as: 'but,' 'then,' 'namely,' 'you know,' 'I mean to say,' etc.

If these expedients can be applied in the moment of danger, dread will diminish, otherwise it will increase.

4. Strong psychic impressions direct attention to other spheres of the senses, so that the domain of the auditory and speech nerves becomes, to a certain extent, free of dread; for instance, travelling in a strange country sometimes has a marked and salutary effect.

5. Being in pleasant company and the use in moderation of alcoholic beverages favourably counteracts dread; on the other hand, the presence of persons standing in any authoritative relation to the stammerer, especially when they watch him, unnerves him, and may bring about an attack.

6. The existence of accessory circumstances, which would not be noticed at all by a non-stammerer, acts differently upon different individuals, frightening one and calming another, the influence being dependent on the experiences the sufferer has previously undergone in similar circumstances.

7. The recollection of occasions in which he has spoken well diminishes dread, whereas the thought of

occurrences at which he has broken down increases it. Brooding over breakdowns and picturing the consequences of the affliction to himself has a most detrimental effect also.

8. The thought that the observer does not know of the infirmity sometimes represses dread; in the same manner a feeling of mental superiority over others, which enables the stammerer to use authority in speaking, has a salutary effect.

CHAPTER V

'INDIVIDUAL-PSYCHOLOGY'

BEFORE proceeding to the Ætiology of the subject it will be well to acquaint ourselves with the main points of Dr. Adler's theory of psychology, termed by him *Individual-Psychology*. He had approached the subject from the side of organic inferiorities and their 'compensations.' These compensations he came to regard as body-mind efforts to overcome somatic obstacles and to fit inferior organs to meet the claims of life. Further he observed that the organism reacted to bodily deficiencies not only by simple compensation, but by over-compensation—a phenomenon which points to the conclusion that the compensation itself is caused by a directed effort towards self-preservation. Bearing in mind that in the production of 'compensations' the psyche always does part of the work, Adler did not hesitate to take the further step of attributing the teleological appearance of the over-compensation to the action of the psyche. He thus created a foundation upon which he could build a consistent explanation of the element of intention in illnesses of a psychical origin. His further studies along these lines enabled Adler to win a deeper insight into the subject, as we will now go on to show.

A. *The fundamental idea of Comparative Individual-Psychology.*

While Freud's Psycho-Analysis is based on a mechanical naturalistic point of view, which gives to the soul the

attributes of a sort of distilling machine, comparative Individual-psychology, as already indicated, starts from the assumption of a synthetic-dynamic unity, by which a definite biological value in the dynamic unity of the personality is attributed to every single impulse. Relying on fundamental results of biological knowledge Individual-psychology sees in every organism a closed and indivisible unity ;—the conception of wholeness is an inseparable part of the conception of a living being. Moreover the parts of an organism yield their meaning to us only if viewed in the light of the whole which is inherent in them. Now what is true of all life must also be true of the psycho-physical unity which we call 'human personality.' There too we must find that directed effort is immanent. There too all the body-mind functions must subserve the self-preservation of the individual. This directed effort of the whole human being to its own ends is the fundamental idea of Individual-psychology, which teaches that to understand a man means to understand him as a unity, immanently directed to its own ends.

The most complete and unbroken interaction of body and mind is upon this view taken for granted and physical and psychical phenomena are both treated as subject to the same dynamic principles. Because of this inherence of aim in the individual it is unnecessary to draw a line of distinction between the phenomena of mind and body. Seen from the individual-psychological standpoint it follows that what we call the 'soul' is a complex of functions or expedients for attack and defence directed towards the self-preservation of the individual,—for 'man has so to re-act to the world as to secure the preservation of the human organism, and its development.'*

* Adler. Menschenkenntriss. Leipzig, 1927. p. 12.

Applying these principles to the life of each individual separately we may distinguish three forms in which the idea of an end or aim is shewn. First the *Biological-Social.* As pure *biological finality,* ends or aims are inherent in the form of the reflex-mechanisms themselves, for these are always subservient to biological aims. Reflexes—for example coughing and sneezing so as to remove strange bodies from the air canals—belong to this category. *Social Finality* includes those aspects of life which can be deduced from the fact of human intercourse and which are no less necessary reactions than mechanical reflexes. Among them may be mentioned tradition, manners, customs and above all language and logical thought. Individual-psychology regards all these as functions of social feeling, which it treats as an inborn instinct developed in man under the mental compulsion of social intercourse. Before it can develop itself, the inherited disposition does, it is true, need contact with the surrounding world and education. The great importance of this development moreover is proved by the fact that the course which it may take is decisive for the fate of the individual.

While social finality first shows itself rather late in the life of the child, the second form, in which the idea of an aim or end exists, namely *Rational finality*—appears very early. The moment that the infant grasps the distinction between his ' I ' and the world without, at that moment the cultivation of rational finality begins. The child begins to see the world without as a world of objects and to seek to make himself master of them. Hand in hand with the growth of the product of Social Finality which is conscious thought, the function of rational finality unfolds itself, the essence of which is to will and plan modifications in the world around. The working out of this theory

naturally leads the Individual-psychologist to take an indeterminist standpoint with regard to the problem of Freewill. The determinants of the will are for him dependant on the aims of each individual and every man creates for himself his own laws in the sphere of his mental life so that an over-riding determinism based on cosmic, animal or social laws does not exist.

The third and final form in which the idea of an end or aim is shown is *Personal Finality* (the individual's ' leading line ') which is the end or aim of the central personality in each case. Personal finality determines which road shall be followed out of the many possible, and thus enjoys primacy over the other two, co-existing as it always does with them. Its superiority may even cause forms of life which are intrinsically subject to social or rational determination to lose their own form of ' finality.' An example will make this clear. Speech as the basic binding element of social life is primarily directed towards purely social ends. But in persons whose personal finality is a striving towards an overweening superiority, this social function may be used for the purpose of insulting or attacking other persons. Again the stammerer turns the speech function into the very opposite of social conduct, his leading line having driven him to isolation, and ' a-social ' conduct. It is clear that an understanding of this phenomenon of the reversal of finality—of the ' whereto ? ' of mental life—can only be won by exhaustive analysis in each case. Both a simple causal explanation and also the usual attempt to throw light upon mental dynamics by means of definitions and ' petitio principi ' will here prove unsatisfactory,—for the details will all be unexplained.

As we proceed it will be clearly seen that it is only from the point of view of the ' end directed unity ' of the

personality that the structure of character—in which should be included the whole of the individual's means of expression and modes of conduct—can be understood. It will also be shown what causes may combine to convert the individual's character, under the compulsion of compensatory tendencies, into a neurotic one, and make the psyche exhibit neurotic phenomena. Among mental phenomena which are determined by aims and which are of great interest in the present inquiry we need here to mention only tendential memories and dreaming. Regarding memory, it is now recognized as a fact that man remembers what he needs to secure his ends ;—the rest he forgets ! Thus, a man who, with slender means, wishes to play a prominent part in Society will lay up an almost inexhaustible repertoire of anecdotes which he will always have ready to his call, although at his every-day professional employment he may suffer from an admittedly bad memory. For the choice of what is to be remembered the Individual's leading line alone is decisive. The same is true of young children's memories. Moreover children generally reveal their purposes fairly unreservedly, a fact that can be put to advantage therapeutically.*

As regards dreams these enable us to detect both the fictitious aims of the individual and the way in which he encourages himself to take up a false attitude to reality.

* Adler. Practice and Theory of Individual-Psychology. 2nd edition, London, 1927 (In particular 'Dream and the Analysis of Dreams'). Further Adler: On the nervous Character, 4th edition, Munich, 1928. Theoretical part, chap. iii. 'The dream is a sketchy reflection of mental attitudes indicating the characteristic ways in which the dreamer faces his problems. The dream accordingly is clothed with the form of the fictitious leading line of the dreamer, and never gives more than attempts at solutions of difficulties. It can thus be used with great advantage to discover the sort of preparations and solutions which the dreamer would make and his leading fiction.'

In young stammerers the frequency of dreams is to be noticed in which the dreamer feels himself cast out from human companionship, (thus, he finds himself in prison, alone on an island, in a cave, etc.), or dreams in which he meets with a giant who terrifies him and who takes away his courage to speak. In such dream-pictures the 'protective' tendencies of the stammerer towards isolation are revealed.

B. *The sense of Inferiority and its Compensation.*

Employing the fundamental principles of Individual-psychology we can now proceed to consider the development of the personality from its first beginnings to its full growth. As we are primarily concerned with the rudimentary unfolding of the mind it is not worth while to study the newborn child, whose functions are a simple expression of biological finality. Our interest only begins with the first signs of objective apperception, when the infant, somewhere about the eighth week, realizes (by means of his touch and taste sensations) a difference between his 'I' and the world without him. This process of finding the 'I' entails the repetition of daily observations and experiences before the child is able to distinguish with certainty between his ego and the objective world. All this however, does not make it certain that in the vocabulary of the child the pronoun 'I' will not first be found in conjunction with perceptional, representational or volitional concepts, for the child requires anyhow a very long series of observations before he has perfected his Body-formula and sees clearly his bodily 'I' as an object of experience. This phase is completed about the sixth year, but the whole process of finding the 'I' is not complete until the child has reached the age of puberty, after which he fully realizes the events of his inner life as objects of experience and clearly

distinguishes between his 'I' as actor and his 'I' as observer.

Although the process of individualization takes a considerable time, yet (as contrasted with the case of animals) its relatively early beginnings may contain moments of great importance, in so far as the response of any particular human organism to the demands made upon it may not be an assured one. Young animals also are helpless. They show themselves, however, quite fit to meet the needs of life, although the process of mental growth has hardly begun. Not so, however, the child. The child finds himself in a highly sophisticated domestic environment in which he is held fast for years in a state of great helplessness and dependance. The young animal can never make an 'experience' of its weakness, for during the time of its dependance it is not yet capable of experience. The child on the other hand is so constantly faced by the, to him irreducible, discords between 'Will' and 'Can' that inevitably *the experience of his helplessness* is impressed upon him. And this experience deepens as time goes on because the circle of objects and aims, which the child would like to turn to its own use, but cannot, grows faster than the child's own powers.

When the child first recognizes his mother as 'you'—a 'you' that is always ready to help childish weakness, to make the impossible possible—he is rapidly forced to the further conclusion that his desires can mostly only be attained by the help of his mother or of any other grown person with whom he finds himself. He experiences his absolute dependance on the grown up. Thus the cries of the child, which at first are merely reflex actions caused by unpleasant bodily sensations, come to be used by him as the means of mobilizing the assistance of the grown

persons surrounding him. More and more his cries are used in the interests of his personal finality.

When the mental growth of the child has advanced so far that he recognizes his essential kinship with those around him, he acquires through observation a third notion—that for his father, his mother and elder relations there is no discord between ' Will ' and ' Can.' The child erroneously concludes that to the ' grown-up ' all things are possible, and out of his own insufficient experience he cannot either understand their aims or suspect that these ' giants ' do not get everything that they want. He only sees continually that grown-ups possess powers over objects that he does understand and that continually make him *feel his own weakness.*

Adler's ' *Sense of Inferiority* ' which he makes a fundamental fact of the child's life, on analysis shows itself to be compounded of these three elements, i.e.,

(1) the sense of Helplessness.

(2) the sense of Dependance on others.

(3) the sense of Weakness in comparison with others.

Although it is not possible to prove the existence of this sense of inferiority at an early stage in the child's life, yet it can be inferred from the ' compensatory ' behaviour of the child. Already in its second year the child begins to strive by every means to push himself into the foreground and to make himself the centre of interest to his elders. These efforts are to be interpreted as the first signs of a movement induced by the child's sense of smallness and by his desire to strike a balance in the direction of a ' would-be-greatness.' The child has begun to direct his willing and thinking in this direction, as he hopes thereby to free himself from his crippling sense of inferiority and to obtain a safe standpoint for his life in the future. The child creates for himself a

'*leading-line*' for further action by starting from his sense of inferiority, and taking as a second fixed point his father or his mother, whom he invests with Godlike qualities. Henceforth every success gives rise to a feeling of pride and every failure to a feeling of anger or shame. The child thus betrays the fact that its natural growth has passed from the simple biological finality of infancy into the wider personal finality of adult life, and in future his *sense of personality* is interested in real progress. No child is able to escape this first phase of the process of Individualization, and it is the problem of Education to bring him safely through it, so as to ensure that his sense of inferiority is not made more acute, and that his aims, which should be towards peace of mind and inner security, do not develop into an overemphasized striving towards power and personal importance.

If the child's further growth ran only along the line from a sense of inferiority towards fictitious personal ideals, the structure of his character would be built up into an exaggerated individualism. Happily the strength of the *social feeling* which aims at a state of being 'in tune with others' normally averts this danger and curbs an exaggerated self-assertiveness. The individual structure of character in a child as in an adult is a medley of social feeling and personal ambition. Both are social structures, but the former is biologically founded and inherent in the disposition while the latter is fed and nourished by temptations which lie close at hand. They are antagonistic to each other so far as the one is directed towards the consolidation and furthering of Communal interests and companionship, the other towards self-magnification in the exclusive interests of the individual at the expense of the rules of the community.

Seeing the essential rôle that social feeling plays in the

mental growth of the child it is desirable to consider the factors that go to make up this, the brighter side of human character. From all that we know to-day of the primitive history of mankind nothing stands out more clearly and unequivocally than that since his beginning, man, owing to poor bodily equipment for either defence or attack, has been forced into forms of association with his fellows in order to ensure his own preservation. To this we owe civilization and culture, the growth of speech, ethics and logic which could only come to expression through such association. As the chief security for the preservation of the human tribe lay in a group structure with its possibilities of reciprocal help, so the conclusion is forced upon us that underlying the fact of social association in the mental growth of mankind there must be an instinctive social feeling in the individual,—which, as has been shown earlier, is subservient to social finality. If we do not start from the standpoint of these evolutionary and biological considerations, we shall easily fall into the error of supposing that social feeling is only the product of an education in altruism. We should thus overlook the fact that the child in the first phase of individualization because of his powerlessness is not able to make any effort towards the reciprocal give-and-take which is the root law of every society. We should also forget that every inborn function of the mind matures but slowly under the stimulating influence of the environment. The infant has no alternative to ego-centric conduct. He knows no obligations because of his weakness; he has '*only rights*'; and because he can make no return at all, the obligations are all on one side and have all to be undertaken by those around him, if the connexion between him and his environment is to be maintained. For the older child although the proportion between

rights that he can lay claim to and the duties which he is forced to undertake is shifted more and more against him, the proportion between his sense of inferiority and his social feeling still remains an upside down one. Thus the lower the self-valuation of the child, the more self-centred he tends to become. The same law holds for grown-up people. The only explanation of this strict uniformity in the phenomena is to assume that the sentiment of social feeling normally displays itself first quite early as an expression of the child's desire for contact with the mother and the realization that to her his person possesses an unique value—his discovery that he is able by his mere existence to *give* her something to live for and happiness. In this way the principle of give-and-take is recognized and the function of social feeling exercised for the first time. This emotional reaction however has its dangers. It does not always result in a healthy development of social feeling, because the craving for affection does not necessarily imply strong social feeling but may denote the presence of an exaggerated desire for personal self-assertion. The direction in which the child's need for tenderness develops—and it is upon this need that his educability depends—will be determined by the extent to which he detaches his social feeling from biological social finality and makes it subservient to personal finality. Education, to keep clear of disastrous mistakes, must aim principally at influencing the child to consolidate both finalities. It is obvious that a one-sided development of the social instinct in the direction of either the biological or the personal finality may lead into hazardous by-paths. The one is likely to end in the stultifying of the individuality, the other in an exaggerated cult of the personality. A gradually increased blending, however, of the two finalities will help the child, assuming that he

is encouraged by those near him, to get rid of his original sense of inferiority so that he will lose more and more his ego-centric standpoint and at last be able to join in the fullest sense in the work of the world around him. In this way he will feel himself compelled to develop his sense of usefulness and place himself at the service of the community for the good of all. By this the danger which threatens every child will be avoided, the danger that its desire for self-assertion may take forms which must develop later in a neurotic direction.

It is worth shortly mentioning that the conception of social feeling is wider in essential points than the relatively narrow conception of sympathetic feeling. It contains, to be more precise, the ideas of being sensible, effective, responsible, and willing to make sacrifices. How far these qualities should be described as necessary parts of social feeling in a wide sense, and how much logic may be said to owe it, will be shown when we come to the Ætiology of stammering.

C. *The increase of the sense of Inferiority and Over-compensation.*

In the previous section we have confined ourselves to a representation of the structure of personality on the basis of ' individual-psychological ' theory and to simplify the survey we have avoided the consideration of individual features of character. Although their insertion into the sketch which we have given would cause a trained teacher few difficulties, we shall not pass by without mentioning and making explicit the main points of the stages in a child's development which are most likely to strengthen its sense of inferiority and thus injure its mental constitution. The following are the most important of these considerations :—

(1) *Organic Inferiority.*

As already stated the problem of the inferiority of organs and of its results is of capital interest to the individual psychologist. The thorough study of the subject from this point of view resulted in the important conclusion that the individual organism taken as a whole ' strives ' against any inferiority of organs and groups of organs by making a special effort and taking great pains not only to re-establish a balance but also so far as possible to convert any appearance of inferiority into its exact opposite. Further observation proved also that every intrusion into life of an organic defect was regularly accompanied by a mental disturbance, because the performance of the compensatory effort was only possible at the cost of increased labour by the brain, and the whole of the personality was involved. In the struggle with these difficulties mental attitudes and forms of expression come into being which only allow us to conclude that the ties which bind an organ to the outer world not only have a correlate in the mental structure which controls them, but also that this structure may be more developed and made mentally more efficient (in favourable cases especially) by systematic training, where there is some deficiency in the organ itself.

If these conclusions by themselves are not enough to prevent a hasty answer to the question whether disposition and inheritance by themselves determine the mental growth of the child, that question can only be answered according to the principles of individual psychology, which sets the end and aims of the individual above the biological materials which he inherits, by saying : ' It does not matter what the Individual brings with him to his birth ; all depends upon what he makes of it ! ' Individual-psychology has never denied the

existence of an inherited constitution, but all its experience has gone to make it hold more and more firmly the view that a bad inherited disposition does not necessarily lead to illnesses of a mental nature. An inferior organ will it is true always be a weak point in the whole organism on which, owing to its relatively small power of resistance, any hurt to the whole organism will re-act with special harm ; but the fact of its weakness will bring it automatically under the working of the law of compensation and thus make possible a new equipoise within certain limits. The danger anyhow cannot always be avoided, (and we are especially concerned with it here) that the organic inferiority may in some cases strengthen the normal sense of inferiority which belongs to every child, and in other cases stimulate unduly and so as to cause over-compensation, the desire for self-assertion. Any such development results in an alteration of the childish personality which causes traits of a nervous character. Thus children, who through a weak constitution have suffered much from illness in the first years of their life, have a sense of self-esteem which is very low, for life appears to them to be a difficult ' vale of tears ' to whose claims they find themselves quite unequal. Great skill is needed if such children are to be successfully defended against their own sense of discouragement and nervous, pathological symptoms are to be avoided.

The development of each individual's mode of life must always depend in the first place upon the part which encouragement from others and practice of all kinds has played in early education. In passing it may be said that the controversial point as to the value of the original endowment of an individual to his ultimate development can only be solved by a consideration of the courage-training factors. By due consideration of these factors

in conjunction with the aims of the individual his natural constitution can be brought into agreement with the condition of his mental development. This does not mean that individual-psychology holds the view held by the Conditionalists, who assign to the influence of training and environment the part of merely removing anything which hinders existing capacities. On the contrary it asserts that the inherited disposition may be more usefully looked on as a very elastic frame into which the individual projects his style of life and within which he makes his own rules for playing the game. The dimensions which this frame ultimately reaches are finally determined for the individual by the growth of his social instinct and of his courage, which growth is made possible by training.

Since a long experience of neurotic patients leads to the conviction that defective power of accomplishment does not depend primarily upon inferior endowment but to a much larger degree on discouragement and systematic avoidance of practice, the factor of inheritance which was never very easy to define and which has been and still is too often used by educators as an excuse for their own failure in responsibility, loses all practical interest ; moreover this is only half the truth, for the facts show that by a proper mobilization of the factors of training and courage an inferiority may be in fact changed right over into a superiority. We are speaking of children of normal mental capacities. For real mental defectives what we have said does not hold true, for the compensatory faculty, which presupposes a complete mental equipment, cannot come into play in their case. In all other cases individual-psychology trusts to the factors of courage and training (although the influence of a lower hereditary endowment cannot altogether be disregarded), and requires the Educator to recognize the principle :

'Every child can do every task.' Without adopting this paradoxical statement as at least a working hypothesis, it will not be possible to banish from education the pessimism which is the main cause everywhere that life full of value and capacity never comes to development.

The effort towards compensation made by an individual suffering from a keen sense of inferiority caused by organic weakness does not only lead to increased activity, but above all reacts on character. In this reaction the objective side of the organic inferiority is not of intrinsic importance, but what matters is what the child thinks of it. Thus some children, who are ugly, too fat, too thin, or too small but who thanks to those around them do not 'suffer' for those qualities, may grow up all right with them; whilst others with the same qualities, but who are made to feel that they are a serious handicap, and thereby are compelled to adopt a hostile attitude to the world around them, develop envy and malice. Similarly with beauty. Beauty is highly esteemed but is much more often a curse to its owner than is commonly believed. The spoiling and admiration that fall to the lot of a beautiful child direct his attention inward upon himself. He becomes ego-centric and self-loving. His inner world is a phantasy of fictitious ideals among which he moves as a prince unchallenged. A bitter return to reality is sooner or later inevitable. The realities of life so mock his expectations that the disillusion is profound and injurious. Another example—children who have suffered in infancy from digestive troubles will later on, encouraged by the over-anxious solicitude of their elders, make a great deal of fuss over the taking of food. Such children make a battle ground of every meal, feeling themselves masters of their environment. They may go on hunger strike, or keep those in charge of them in a state of

anxiety about their food by constant fault finding and aversion to what is set before them. They very often develop marked traits of self-seeking and avarice as the expression of this self-created compensating tendency ' to have everything but give nothing.'

Cases nearly allied to those mentioned of organic deficiencies are those of children born into grinding poverty. Distasteful nourishment together with often deficient care and sordid surroundings exercise a similar unfavourable influence. Even a wise bringing-up on the part of the parents cannot always neutralize the effects of the physical environment. Most important is the Joylessness of an economically unsuitable environment of this kind where the gratification of even the smallest childish wish is often impossible. The accumulation of unsatisfied longings grows, repeated frustration creating a bitterness which reacts sharply on the sense of inferiority. This type of child early discovers the hostility of life towards himself and—to find means to combat it—all too easily adopts an attitude of opposition to the rules of social conduct. Often enough the psychic state of stress is heightened by unkindness which, by a failure to produce any sense of personal connection with the community, throttles the social instinct and replaces it by a disposition to unbridled self-assertion. The warped instinct of companionship, in conjunction with a hostile attitude towards the community, causes such children to turn their backs on the true needs of life and induces them to aim at their often fictitious purposes by any means that offer themselves instead of following the straight road of production. The ranks of the disreputable and the criminal classes are largely recruited from such unfortunates.

(2) *The Constellation of the Family.*

The psychic growth of the child falls first to be studied in the living environment in which birth has placed him, and the influence of the family circle will accordingly be found to exercise a determining influence on his aims in life and mode of living in later years. If the parents are competent to direct the mental upbringing of their child and prevent mental malformations no institution can rival the education provided by the home. But unfortunately most parents are not good psychologists, nor have they at command a great deal of educational skill. Most parents suffer themselves from arrested development and in the rearing of their children they fall very easily into the same errors that deformed their own upbringing.

As has already been noted the child experiences his first social contact through his mother. For the Individual-psychologist the interest of these infantile contacts lies in the fact that they form the natural root from which the child's social instinct should later develop. If the mother fails in her function it can be reckoned with certainty that her failure will have results of capital importance in the future. Whether the failure is one of deficiency or excess of maternal warmth is immaterial; in both cases the ability to ' give and take ' will only come to a stunted growth;—in the first because the child has learned hostility to life from her who is nearest to him, and is thereby induced to an early retreat within himself; in the second because the mother has concentrated the childish sense of social instinct on herself, hindering its natural expansion to the world without. When it is necessary to help such a person later in life to get over the difficulties which life causes him it is necessary to invent for him a substitute for his mother, without which he cannot bridge the gulf between himself and the community.

The orientation which a child receives from his father is mainly by way of his father's economic-social function. It has already been seen that the position of the father as head and supporter of the family causes him to become, in the eyes of the child, a being endowed with qualities of all-might and all-knowledge. This 'more-than-life size' picture of his father becomes a fixed point in the laying out by the child of his leading line. As a rule the father impresses himself on the small child boundlessly, but if he has the wisdom to diminish the 'pathos of distance' between them, and by the judicious use of smaller intermediate aims to raise the child's hope of the future, the example of the father will be one of fruitful encouragement, demonstrating to the child how the difficulties of life can be met and overcome. But if the father's view of life is one of discouragement in face of his own problems, if, in the family circle he loses no opportunity of complaining of his disillusions, the child's picture of the world will be dangerously falsified, and he will tend to fill his perspective of the future with imaginary terrors and difficulties. It will be useful to mention here that a girl falls into a mistake of this kind less often than a boy. As early as the fourth year she has generally formed for herself a clear perception of her future rôle whose activities lie in the more restricted frame of the home, while the boy directs his attention on the career of the father in the world outside. Now if a father betrays the existence of his discouragement, the boy will be compelled by his false estimate of the difficulties, to draw back in fear from the battle of life and erect a barricade, which sometimes takes the form of a protective impediment of speech, against the dangers which he has imagined. This difference of childish outlook between the girl and the boy explains the fact (noticed by nearly all writers on the

subject but for which no convincing grounds have hitherto been found) that the tale of stammering girls to stammering boys is in a ratio of 1 : 4.

The greater difficulty for the girl lies in her sex. Even in our own era (which has thousands of years of man's domination behind it) the *inferiority of the woman* is still taken to be an established fact ordained by nature. Certainly a road is gradually being broken to a more rational conception, but even to-day man generally shows little inclination to renounce his manly privileges, which have been his so long by right of law, manners and customs. This difference in value between the sexes exercises pressure on the girl child from nursery days onwards and may easily poison her disposition. It shows itself as a deep fundamental sentiment built up from remarks or conduct belittling the value of woman and woman's work. If a girl acquires a notion that 'woman' is a being of secondary rank, this so overshadows her development that an urgent pressure may be released, which leads her to strive to achieve equality with man by every available means. Such girls give up playing with dolls, seek the company of boys as playmates and seize every opportunity of exceeding them in wildness and love of adventure. Small boys may also feel this urgent pressure before in their fourth year they have become certain of their own sex. They are beset by a fear that to them perhaps will be assigned an inferior womanly rôle in life. They seek to counteract this danger of inferiority, of becoming an 'under-being,' by striving with all their might to achieve the unchallenged condition of an 'over-being.' This takes the form of an exaggerated manliness. Such boys are apt to exhibit traits of downright defiance, of obstinacy and of the attitude of 'I am always right'—with the motive of

sheltering themselves from the aspersion of womanly weakness. Under the influence of the mental law of polarity, all 'oppositions' also are easily pushed to an extreme. It is not uncommon therefore to meet neurotics by whom nearly all the relations of life are classified as either manly or womanly. Thus all forms of unrestrained aggression (direct attack, conspicuous knowledge, heroic courage, or great strength, etc.) will be manly; all restraints and wants (cowardice, ignorance, obedience, misery etc.) will on the other hand be 'womanly.' As all that is womanly is conceived as inferior, the soul of the child, under the urge of the compensatory tendency, strives with all its power to suppress the womanly and achieve the manly line, a common compulsory form of behaviour, that Adler describes as the 'manly protest.'*

* How intensely a nervous boy may react to anything that lays him under the least suspicion of femininity is shown by the following case. A boy, the only child of his parents, began to stammer at about the age of four and a half, some months after he had had his first pair of breeches. A sickly delicate child he had always found he could get his own way with his parents with the infallible result that they found themselves ultimately without any means of getting him to do the least thing. He roundly refused to obey his mother and nursemaid, but up against a stern father he took to stammering so pitiably that his father gave up the attempt to coerce the 'poor little chap.' Now when the boy was promoted to his first breeches it appeared that here at last in the discarded petticoat lay a means of keeping him in hand. Neither admonitions nor threats had hitherto been successful, but the threat of being again dressed in girl's clothes was sufficient to make him pliable to his mother's will. The first time the breeches had been worn the boy went with his parents to have his photograph taken. A few weeks later the photograph was shown to an acquaintance, his mother remarking in an undertone that the boy's face had come out 'quite girlish.' As soon as his mother had left the room with her friend, the boy seized the album, tore the photograph out and threw it on the fire. When his mother came back into the room he reproached her angrily—'How *can* you say that I look like a girl!' Nervous boys and girls alike come under the dictatorship of this mental compulsion, and where the 'manly protest' is shattered by the facts of life, it produces in lieu of it a line of action which results in a protective neurotic symptom—the girl seeking preferably protection against the duties of womanhood and the boy seeking protection against the necessity of taking part in the battle of life.

How far the question of sex may be a starting point for ' anxiety ' about life in individual cases depends upon the extent to which the child's sense of inferiority has been sharpened by difficulties encountered inside the circle of the family. In this respect the *youngest* child, the *only* child and the *second-born* child of the family are in most danger. Confining ourselves to the main points, it is to be observed of the *youngest* child that he generally grows up in a warmer atmosphere than his elder brothers and sisters. He is more spoilt, and finds himself the centre of his little world without having to make any return. His position is very much that of the delicate child who is surrounded from his birth with anxious care and ready help in all difficulties. The sense of inferiority of the *youngest* child is notably increased by the unnaturally long period in which he is known as ' Baby,' too young to be trusted in practical matters by his elders. But as the child cannot do nothing but has an urgent desire for some form of compensation, he naturally develops a striving to soar superior to the rest of his family. As he seldom seeks an opportunity of practical accomplishment to which he is unused, he is generally wanting in courage, a defect that he takes the trouble to hide where possible by rebelliousness. If during his school years he can succeed in becoming bolder spurred by his fictitious aims he may become capable in later life of accomplishment of real value.

The *only* child finds himself in like manner in a situation full of difficulties. He has to bear the brunt of the enthusiasm for education displayed by all the grown-ups round him, who usually wish to make of him the perfect example of childhood. His scheme of life is all thought out and planned for him so that there is no scope for the development of self-reliance. Continually surrounded by

the excessive care of the parents who try to spare the child all difficulty, it easily happens that he prefers to hold fast to his pleasant state of dependence, which he is able to use to assure himself of a lordship of sorts over the family. As he does not develop the quality of courage, it will happen later that he will always seek for situations in which he can be the centre of observation without having to contribute anything, and in which other men can be made to serve his own weakness. Only children especially are tempted to seek to secure for themselves an exceptional position by holding fast to childish faults. Not seldom they are inapt for life, avoiding every situation which makes a demand on them for action and independence.

The second born child of a family.

The child in this position is in danger principally of an over-heated effort to rival his elder brother or sister, who possesses more freedom and appears to him to be of greater value in the family than himself. He seems to be always ' under steam ' and never relaxes. If the difference in age is not too great, so that he is able actually to compete with his elder, his efforts may result in a healthy development. It has also been observed that second children will develop marked talent in directions especially where none have been shown by the elder. If the younger child cannot compete successfully with his elder, envy, and the feeling of being left behind are apt to gain such power over him that he loses inner balance and finds it very difficult to adopt a sensible attitude towards life.

The stammerer is recruited in most cases from these three categories of children. But for all children there are positions of difficulty. Stammering in an *eldest* child has been traced to discouragement through over-anxiety to fulfil the expectations held of him as the

eldest, to which he does not believe himself equal. A failure of this kind is bound to press specially heavily on the feeling of self-value of an eldest boy when the birth of a *sister* follows only a year or so after his own. This arrangement of the family often creates a very severe case of neurosis, the possibility of the ambitious second child, although she is ' only a girl,' catching him up appearing to seal the fate of the elder. There are naturally other combinations—such as the position of one boy among several girls, the middle child between three or more brothers and sisters—into which we have not space to enter. It is always the same story of an effort towards ' overheated ' self-assertion, a striving for superiority over others, an effort which by turning the attention of the individual in upon himself more or less throttles the what should be the saving development of the social instinct and courage, if it does not make it entirely impossible.

(3) *The influence of Education.*

While the psychic factors that we have been considering in connection with the sense of inferiority and the constitution of the family exercise an almost fatal influence on the growth of personality, it should be the task of a well planned education to try to influence mental behaviour and establish a therapy of the emotions in such a way as to bring the patient out of any by-paths into which he may have been induced to stray. This important problem can only in the rarest instances be solved by the parents, as they have as a rule no definite grounding in the fundamental problems of life. For the most part the education which the child receives at home is acquired through the sentimental relation of the parents to the child. In this relation *family egoism* frequently plays an unduly large part. The home education falls thereby into the grave error of allowing the child to

suppose that not only he has the right, but also, that he has the duty to exalt himself above others. This idea is strengthened by the example of the father's authority, which seems to lend a logical interpretation to the idea of the leadership of the head of the family. It gives the child an imaginative picture that opens up new sources of childish ambition and self-assertion. The child concludes that he will be able to exact from others in his environment the same obedience and submission that his father receives in the family, and is thus misled into adopting a hostile attitude towards his surroundings. The mother also encourages the childish sense of personal value because in her efforts at education she aims chiefly at blamelessness and faultlessness in ' her ' child. It only accords with such a principle of education if she is inclined to blush for every fault, and in her pride to rejoice excessively at every success which her child achieves.

That Individual-psychology refuses the ' sugar and whip ' method of education goes without saying, but equally it does not recommend the rearing of ' model ' children who commonly fail in later life in some more or less serious manner owing to the fact that their social instinct whilst developed so far as concerns adaptability for self-discipline has not developed through self-reliance, courage, and common-sense to responsibility. An education based on compulsory obedience will always avenge itself, even if the results are often only seen later. The reason for this is that the cultivation of obedience seriously deepens the child's sense of inferiority and causes it to take an attitude of rebellion, the subsequent removal of which results in unexpected difficulties—notably in the case of stammerers, where rebellion is often present in a hidden form. Perhaps only those who have gained a close acquaintance with these forms of myster-

ious rebellion in the course of their practice are able to appreciate to the full the harm of an education based on authority. Parents will certainly deny the consequences of this type of education, for to admit it would amount to self-accusation; and they will justify their own error in education by laying the blame on the original disposition of the child.

We gladly concede that an education grounded on authority when it is mitigated by love and affection, and avoids the scandal of corporal punishment, often gives fairly good results; but in such cases the child must not suffer from the undue pressure upon the sense of his own personal value which results either from some organic inferiority, or from his place in the family circle. An education based on authority will be without exception evil in its results on the growth of the child when it is evidently the expression of hardness and unkindness. If love fails in the nursery, the child will get the notion that he moves in a world of enemies and thus lose every chance of developing his social instinct in the desirable direction. We must not wonder when later in life such a child exhibits the same coldness and lack of sentiment that he experienced. These negative qualities were not an inheritance from his parents but the avenging consequences of their loveless conduct towards him. It is not surprising to find that these children, who are thus put in an unnatural attitude of defence against the world, end in the ranks of the neurotic, the vagabonds or the criminal.

The spoiling, over-cossetting type of education can be as bad a preparation for life as the loveless. A child who is over-sheltered and surrounded by an atmosphere of almost continuous admiration and loving care is quick to see in his prominence in his home environment a sure

road to the compensation of his infantile sense of inferiority. As we have seen in the case of the only child, the spoiled child relies on his helplessness to secure for himself the help of others. He will thereby often find himself in collision with those outside his home for his arbitrary demands naturally arouse resistence in others. This does not however cause him to lay aside his attitude of arrogance and the clashes have a way of becoming more and more violent,—the child being provoked by the want of compliance with which he is met. A character developed along such lines causes its possessor to bear himself, as if the world was bound to grant him special recognition in all his claims. But as the facts of life are not in the least likely to grant the individual any such concession, and as he is not in the least prepared for situations which call for self-reliance and a proper regard for the interest of others, failure is only too often his portion in life.

Lastly a *nagging* education has to be considered. This works out, in the same way as the spoiling education, in stunting the natural growth of self-reliance. Nagging parents, who are always finding something to complain about in their children, thereby endanger seriously their peaceful growth and inner security. With this type of upbringing the child becomes in self-defence deaf to the stream of warnings, thus adopting a defensive mental attitude which is forced upon him. Many childish faults, including stammering, bedwetting, nail-biting, etc., can be ascribed to defensive reactions against continued nagging. The difficulties of the environment are increased for the child in such cases by the parents' habits of prophesying disaster in the future for their erring offspring. No principle of education could be more calculated to hamper the development of the courage which is necessary for achievement than this habit of

prophesying future calamity. It is little to be wondered at if children brought up in such an atmosphere in later life fail in self-reliance or if, when grown up, they incline to neglect duties and thus leave to those around them the same business of constantly reminding them and urging them on, that in early life their parents had undertaken, —to their serious detriment.

Few of the faults of education of which we have spoken are the result of defective educational insight on the parents' part. Rather they are the result of a faulty method of life of the parents themselves. Whether the personal aims in life of the parent create an atmosphere of undue authority or of nagging so that the child, in the interests of its own right to existence, takes refuge in self-defence in a rebellious attitude, or whether the child finds himself in a nursery where the mental atmosphere is one of incubator-like warmth, so that the tendency towards egoism has full opportunity to flourish, comes to much the same thing. The natural infantile sense of inferiority in both cases is artificially strengthened, and the child is driven to seek by means of over-compensation the outlets which the stunted growth of his social instinct and courage for achievement cannot afford him.

CHAPTER VI

THE ÆTIOLOGY OF STAMMERING

IN the preceding chapter we have tried to show that personality is so constructed as to be a unity or whole which follows its own ends, and we have indicated in connexion therewith the many influences which may tend both to heighten the child's sense of inferiority, and to set in action the mechanism of over-compensation. We have pointed out that the growth of the individual is determined by the interplay of the aim of personal self-assertion and of the aim of biologically-grounded social feeling, and that in this the development, courage, and the wider communal or social instinct act independently of each other. Emphasis has been laid on the point that nervous symptoms are an expression of the whole personality. The child feels compelled in protection of his individuality to retreat from demands of life that he finds too difficult.

The conception of character, which we have so far been using and explaining, is applied by comparative individual psychology to the problems of the nervous and neurotic character without substantial change. In both cases it is the expression of a personal finality directed towards mastery and self-assertion. The influence that the social instincts maintains over the individualization of the character determines in each case whether this desire for dominance takes form or not

in what can only be called 'a claim to divine rights' (Gottähnlichkeit), and drives the individual into neurosis. A man can only be said to possess a sane mind when he has achieved such a blending of his aims for dominance with the social instinct that he is able to 'get out himself' courageously, and make himself useful to his fellow-men.

The Basis of the Nervous Character stands in strong contrast. Here there is no such blending of the finalities. The 'will to power' predominates over the 'will-to-the-whole,' more or less throttling the social instinct. How far this Basis leads to an 'arrangement' of nervous symptoms and to the formation of a nervous character depends on how heavy a load life lays on the psyche. If the psyche sooner or later feels itself overloaded, it will retire from the field and protect itself against further trials of strength by the erection of a barricade in the form of a nervous symptom. The permanency or the transitoriness of such symptoms is determined solely by the extent of the inner distress of the individual in face of difficulty as will be shown over the beginnings of stammering and as happens every day when normal people stammer through excitement or uncertainty. The fixing of the symptoms of stammering will always take place at the moment the child acquires the notion that by their display he can avoid certain difficulties and so make his life easier—in other words when the symptoms are 'good business.' At this stage the child makes his stammer an integral part of his *nervous will*. To attempt to correct it by attacking the symptom itself with speaking and breathing exercises is useless, for the symptom is a logically chosen weapon of defence for the hard-pressed psyche. It goes without saying that since his aim is to make his life easier the stammerer does not consciously wish for his impediment. This is why he is quite willing

to go some of the way to cure, if he takes a course of speech-drill. But relapse is inevitable, for the *release from taking his share in life* that he unconsciously seeks is to be had only if he pays ' dues ' in the form of the inconvenient symptoms.

The question of *how* the symptoms of stammering arise can be best answered by the history of an actual case. A boy of six and a quarter years of age began to stammer shortly before his entry into school. He was the youngest child but one and the only boy among four girls. The father, a lower civil servant, saw little of his children, only stepping in when his authority was invoked, or when it was a question of punishment. The boy was somewhat delicate at birth, but after the age of two became a strong child. His mother watched over her only boy with particular care, taking his part on all occasions against both father and sisters. The three elder sisters sought to indemnify themselves for the privileges of the ' prince ' of the family by making a closed ring against him. They made the most of his faults and refused to treat him in any way seriously.

As was to be expected in such family circumstances the boy grew up in great dependance on his mother, showing little inclination towards either self-reliance or courage to do things. Besides, the attitude of active discouragement which his sisters displayed towards him was sufficient to prevent him feeling any confidence in himself and to shut off all spontaneity of outlook. The inner defeat caused by these discouraging influences came to expression when the boy was three and a half years old—his father was then (summer, 1915) on active service —and he repeatedly expressed the wish that he could be a girl because then he ' could not then be made to go and fight.' He ceased to play with the boys of the neigh-

bourhood and confined himself to playing with the dolls of his youngest sister. This did not prevent him from listening in speechless wonder to the tales his father told of the war when he came home on leave. The desire did then arise in him to be a hero too, but he whispered secretly to his mother that he would never dare to be. His sense of inferiority and his cowardice for life were heightened still further in the following two years. The, to him, overwhelming greatness of the father, the coddling he received from his mother, and lastly the closed phalanx of his elder sisters allowed little opportunity for his own personal courage for life to show itself. He succeeded in getting his mother and his youngest sister to be subservient to his will, but he faced accomplishment on his own account very rarely. In time he developed significant traits of cowardly anxiety and sensitiveness on the one hand, and on the other of intolerance and bad temper—ways of conduct which proved that the child was suffering under the pressure of the aim of making the invulnerability of his own personal integrity the one and only law of his life. These 'nervous' traits of character by themselves already practically play the part of neurotic symptoms, being subservient to the weakening sentiment of self-assertion and performing the task of protecting the individual against the diminution of his feeling of personality. They are as much bound up with the destiny of the child which has them as are any symptoms of stuttering for a child who stammers.

The first recollections of the child whose story we are telling are of particular interest. He remembered that at four years of age his mother had sent him to the cellar to fetch potatoes, but that he had made the condition that she should wait for him at the cellar door. When he found himself in the dim light of the cellar he thought he

heard a suspicious noise and ran like the wind to the foot of the cellar steps to call his mother to his help. He noticed that in his great fear he was hardly able to get out any words, when he tried to call out. No one who is familiar with the interpretation of childish memories will doubt that this incident remained fixed in the child's memory for any reason except that it strengthened and confirmed an existing tendency. It was somewhat as follows—' When I am alone in any danger I feel myself so powerless that I can hardly utter a sound.' Such an anxiety causing situation will be used by the child later on as a memorandum or memento. It will become through introspective brooding a ' fixed ' compulsory symptom in danger-threatening situations, where it is invariably used to serve the purpose of protecting the feeling of personality.

The boy in the long absence of his father had drawn back more and more from reality. Stimulated by the fairy tales which his mother told him almost daily he imagined himself a ' prince,'—the *prince ideal* being produced by the imperious demand for compensation of his galling sense of personal powerlessness. Under the influence of the ' prince ' fiction, his passionate nature became more and more marked, and he strove by every means to become master of the house. Early in 1917 his father was freed from service and returned home. Finding that the presence of his father thwarted the unhindered accomplishment of his will the boy came into an open opposition to him. He thought of ways and means of all sorts for annoying and provoking his father. Among other things, he got some cabbage seed and sowed it in the flower beds that his father took much trouble over. Caught by his father in the act he could only produce a few stuttered words. The fixing of the stammer first

came early in the following year. School had been held up to him as a bugbear, with the natural result that as Easter drew near and with it his first term he felt more and more unprotected and unsafe and clung more and more fearfully to his mother. One morning towards the end of March he came unwashed to the breakfast-table. His father took him sharply to task, his mother, who usually took his part, not being in the room at the moment. When he tried to excuse himself he could only stammer helplessly. From then on he could not speak to his father without stammering except when his mother, on whose help he could always rely, was present. At school the defect of speech grew rapidly worse as the child daily experienced to the full his personal powerlessness not being in the least prepared for any useful intercourse either with his teacher or with companions of his own age. When he had played alone it had been in the rôle of 'prince,' and caught in the mesh of this illusionary network he had become compelled under the pressure of mental habit to bring his whole conduct into line with that ideal. But the demands of life are for realities, from which no one can withdraw, and his phantasy was therefore bound to fail. Indeed every systematized effort to escape from the demands of life must lead to the creation of a mental attitude of which protection from the demands of life will be the most prominent feature.

This sketch makes it easy for any one to see what factors were at work to heighten the boy's sense of inferiority to such extreme sensitiveness and to launch him on a fictitious line of compensatory self-expression that could only end in making him a useless member of the community. Wholly wrapped up in dreams of imaginary deeds that offered him the illusory promise of superiority, he neglected the opportunity of developing

his social instinct in friendly intercourse with his fellows and of achieving a courageous and independent outlook. His attention was exclusively turned inwards upon himself and he was always looking round for deliverance from the demands made upon him by others—in short, for protection from the claims of life. Such an attitude was bound sooner or later to come into conflict with reality, and it could have been foreseen that the collapse of the boy's mental ' inflation ' would take place at the moment that he found himself in a situation for which his false method of life had not prepared him. This moment was clearly very near when entry into the dreaded school was threatened. It was then that the fixing of the stammering symptoms took place under the pressure of the tendency to seek protection—a stabilization which had long been in preparation, as we saw in the revealing memory of childhood given above—' left alone in danger I can scarcely utter a sound.'

It is obvious, if such a child is to be helped, that it is necessary to take the trouble to find the point where his education first went wrong. For it is at that point that the psychic weapons of attack and defence will have been forged by the child. The story has made it clear where that point should be looked for. It is also clear that stammering can only be cured if the patient is induced to revise his method of life and to bring his personal aims into accord with the claims which life makes upon him. He will then be able to renounce the symptoms, which have acted as *automatic brakes*, coming into action at moments when the frightened psyche wished to call attention to its own weakness and helplessness so as to obtain considerate treatment and relief from the disagreeable necessity of active accomplishment, to which it felt itself unequal.

In every case (see Chapter VII) as in the one just dealt with it is possible for the understanding to give a meaning to the symptom. But it is not at all through the study of the symptom that the understanding reaches this meaning. The meaning has to be discovered (with the help of the method of observation which is based on treating the individual as the embodiment of finalities) by the exploration of the memory of the child and of the circumstances of his life. The symptom will thus be found to take its place where the tendency of the psyche to seek protection came first into full play. It will be found that stammerers without exception belong to the type of ambitious people who have been discouraged and who have developed a style of life founded on their magnified sense of inferiority and directed towards an increase in their sense of personality. Whether this increase is obtained by the help of king, prince or hero fictions makes no difference. The determining factor is the flight from reality, in which the personality seeks to create for itself by fictious means an unreal situation with easier rules of play for the game. If the stammerer is forced into a contact with reality in which he is afraid of some injury to his sense of personality, he will automatically defend himself against it by the use of his protective symptom.

It is hardly necessary to add that stammering is not always used by the stammerer as a gesture intended to arouse sympathy, but it can also be employed as a weapon of spite or rebellion in a struggle for mastery, as, for example, when it is used ' to spoil sport ' or to attract attention when the child feels itself neglected,—and for much else. In a case of long standing the symptom has always become the meeting point of altogether too many causes, for the child (especially if its discouragement with

life tends to increase) discovers new uses in the course of time for his protective impediment in speech. Among these causes one generally becomes very important, namely, the child's sham fight with his trouble. At first the stammerer himself took part in creating his functional impediment so as to relieve his inner stress, but now he would gladly do away with it if he could, but because his egoism caused him to *want* the stammer as an integral part of his plan of life the effort to get rid of it is foredoomed to failure. However, defeated he sets to again, because if he did not he would lose the part of hero. This sham fight gives him the satisfaction of feeling that he has won a victory over his arch enemy —stammering—every time that he succeeds in speaking in spite of the anxiety and of the ' hang up ' which robs him of his breath. If he scores a succession of such victories without any evil consequences to himself, his courage rises for two or three days with the result that the anticipation and preoccupation which subserve the protective tendency decrease, speech becomes easier, and at last he feels himself upon the high road to freedom from his infirmity. But as his fundamental inward disposition has not altered, his newly-won position will not be maintained. He does not wish to part finally with his illusions and destroy his inner kingdom and so he always withdraws again into his fictitious realm, which seems to offer him the best protection. And so the sham fight begins all over again. If victories over the speech difficulty cease, and if the attempt to speak ends in a complete fiasco, he will indemnify his sense of personal value for the failure by the thought that undoubtedly he would have attained brilliant success had not his unhappy ' fate ' hindered him.

So long as the fundamental point of view is not altered

the stammerer hangs on to his trouble with all the strength of years of mental training as a drowning man clings to a life-buoy. This point betrays itself clearly in his fancies and dreams. Out of the great mass of material available we will take two dreams as illustrations. They are the dreams of a young man and a young woman dreamt soon after they had begun a course of treatment for stammering.

The dream of the young man was as follows :—

' I had written a letter to my fiancée asking her to meet me at three o'clock the next day and to wait for me at such and such a place. When I arrived I had to wait some time for her. This annoyed me very much, and when she appeared I scolded her. She excused herself quietly, saying that she had not been able to come earlier. At that I was so irritated that I boxed her ears. Crying, she ran away. I wanted to run after her, but was prevented by the thought that I should not now be able to speak to her without stammering ; so in the end I went home alone.' The day before the dream the young man really had written this invitation to his fiancée. He was generally late at his office and late in keeping appointments, but could not bear that any one should keep *him* waiting. The part in the dream allotted to the thought of the impediment in speech will be easily understood—for every dream indicates the characteristic conduct which the dreamer displays before any particular problem (see footnote, page 118). Since childhood this young man had been accustomed to make himself master of the house. Opposition, which he occasionally met with from his mother or elder sister, he sought to get round by fits of passion or daylong sulking. His father was a business man too much occupied with his business to concern himself with his children. We see in the dream how the young man reverts to his earlier accustomed behaviour.

'If my fiancée will not punctually obey my dictatorial demands, then I will mount the "high horse" and use again the same means which I tried before and which have saved me from defeat!' When, under the influence of rage, in his dream he takes to deeds and the girl escapes him by flight, his fictitious line makes its appearance and compels, to his usual false refuge of defiant sulking, the mechanism of a stammer being calculated to keep him accurately on this line. So long as he was able to make a scene with his fiancée there was no thought of stammering. It arose—exactly like a *force majeure*—at the moment when he ought to have climbed down from his 'high horse' and begged his fiancée's pardon. But because such conduct would have been in conflict with his fictive final purpose never to appear in public except as a dictator, the brake of stammering was automatically applied. So he resists the inclination towards a display of social instinct, and remains stuck on his 'high horse' with the thought that 'I will not run after a girl any more than I ever ran after my mother and my sister.'

The dream of the young woman ran thus :—

'I had danced with my husband, my friend playing the piano. Afterwards I danced with my friend, and at last alone while my husband played the violin. Then I should have liked to dance a Boston waltz with my husband, but did not dare to ask my friend to play the beautiful "Destiny Boston" because I feared to stammer over the "D" and "B." I was very sorry about it, for I longed to dance again.' In explanation of the dream the lady stated she had been the leading partner in the dance with her husband, and had taken the man's place in the dance with her friend. The solo dance had given her particular pleasure because she had felt free from all compulsion, and her husband and friend had to take the

time from her just as she chose to call it out. It will be found that, in people whose leading line is in the direction of 'having the lead' and expecting to call the tune and time for others, the symptom of stammering will appear at the moment that they are threatened with a loss of leadership. To the question whether she *could* dance the Boston the lady answered with unnecessary emphasis: 'Unfortunately, no. I intended to take private lessons last winter, but it came to nothing. My husband, however, dances it very well.' So we notice that had she danced the Boston with her husband in her dream she would have had to submit herself to his leadership. As her fictitious line would not permit this, the stammer appears to save the situation and put on the brake just at the moment where to have spoken a word would have delivered her over to the leadership of her husband. Moreover, 'Destiny' means fate, and it is clear from the whole mental attitude of this lady, that the counterbalancing movement of her mind was bound to become most marked at this point, for she was still energetically struggling against the fate which had sent her into the world to be a woman instead of a man and a leader. Hence also her great regret in the end of the dream. To go further into the circumstances that gave rise to this dream would take us too far. It is sufficient for our purpose to have shown the training of the dream that aims at holding the 'Neurotic' fast to her leading line. It may be remarked in passing that according to Individual psychology every dream is a step on the road to *Self-deception*, the dreamer seeking to solve his problems, not in accordance with the logic of life, but to suit his personal aim for self-assertion. Further, the dream helps to bring the whole frame of mind and the emotions in accord with this self-deception.

In waking life phantasy-spinning, preoccupation and anticipation play the part for the stammerer, which training in dreams fulfils in sleep. They all work hand in hand to ensure the production of a reliable functioning of the impediment in speech which has been 'arranged' to protect the feeling of personality. This negative training in support of the protective tendency first begins when the increasing uncertainty of the child makes it urgently necessary for him to concentrate his attention upon points which he knows are important. (The neurotic, of course, seldom has the least idea of the logic of the process.) The result is a rapid narrowing of the mental field into the form of a motive and mental aptitude which under the increased pressure of the leading fiction leads to a further development of the training and a worsening of the functional disturbance. Happily the fact that the function has been disturbed by fictitious means, which can always be corrected, makes complete cure possible after all. It is generally known that a fair percentage of small children stammer during the growth of the speech function between the second and third year. This is due merely to technical difficulties of pronunciation and is not of pathological significance. Such stammering is particularly noticeable in the case of an 'only' or youngest child, who have round them only grown-ups or others older than themselves, and are driven forward too quickly to extend their vocabulary. A conflict thus arises between words smooth and familiar to the child which he prefers to use and those that are new to him and unpractised, involving as they generally do the construction of sentences. With further practice this difficulty disappears, and with increasing security of expression the child in one to three months loses his stammer which may have taken not only a clonic but also a tonic form.

The cases where chronic stammering follows immediately on this infantile form of it are rare; chronic stammering does not show itself as a rule until one and a half to three years later—the child meanwhile having spoken normally. It is not correct to suppose that chronic stammering except in cases where it is the result of shock or infectious illness necessarily follows from the stage of infantile stammering. My experience is that this is true of only a small percentage of stammerers. In by far the greater number of cases the first appearance of a chronic stammer follows a *change of circumstances*. It is the hoisting of a distress signal. The most usual changes which occasion it are the beginning of school life, change of school or teacher, failure in school (especially never moving up), death of favourite parent, second marriage of father or mother, birth of a brother or sister resulting in the comparative neglect of the older child by mother and nurse. If the child's line of fiction is already more or less firmly fixed, the need for adaptation to the altered situation lays a task upon him from which he can find no outlet but a 'nervous' one. In order to protect his very sensitive sense of personality he will of himself seek security in isolation. Now there is nothing better qualified to achieve effective isolation than a refusal to speak. It is clear that through stammering a child, who has not developed sufficient vital courage to 'give out' to others, will be able to maintain a defensive distance between himself and the environment whose demands he fears. This explains why no difficulty is experienced by a stammerer in speaking when he is alone; or when he has, for example, to sing before others, for singing does not involve intercourse with them—his fictitious line has no call to appear. It also explains why the intensity of the stammer depends on the difficulties

which the child has encountered in contact with the persons of his environment. A tenderly nurtured but stammering child who has met with no opposition in his family will speak more fluently at home than outside of it. Conversely a stammering child, who has met with coldness and unkindness at home, will stammer there but speak faultlessly with strangers. Again the stammering child, who is on the easiest terms with his mother, will be able to read to her without difficulty, while before a father who constantly nags at and corrects him he will fail hopelessly to do so. And so on.

Why stammerers should stammer at the beginning of a sentence but yet often be able to finish it successfully, how the stammerer has come to use the various gestures which accompany his speech, and so on, are points that have puzzled earlier students. The reasons become obvious in the light of individual-psychological theory. Stammering is a protective method of attaining security, and though it is engendered by the force of the 'manly protest,' it is expressed by passive (womanly) means. It is obvious therefore that the stammer, to fulfil its initial purpose of protection, will appear in its most intensive form at the moment when the patient is obliged to emerge from the shelter of his isolation. Otherwise the intention of the whole 'arrangement' would be frustrated. The anomalies of breathing in stammering patients are to be explained in the same way, and are also results of the protective intention. Of special interest are those cases in which the stammerer holds his breath without any attempt at speech, and does not begin to speak till his breath has nearly given out. This is clearly a form of a pseudo-masochistic nature; the patient has first to be made to suffer the degradation of 'womanly' weakness—in this case the breathlessness—

before he is allowed to climb to the superior position of a ' man ' and be allowed to speak.

The explanation of the phenomenon of the repetition—stammer (repeating one or many times the first letter or syllable of a word) is that the stammerer on the one hand suffers from a very low self-valuation, and on the other, under the compulsion of the protective tendency over-estimates the difficulty of his problems, and especially that of speech. As is to be expected owing to his low valuation of himself and his over-valuation of his difficulties he loses the courage to move forward so that even his speech shows the hesitation of his attitude. He is very like a man who wants to jump over a fence but makes several abortive attempts before he dares to spring. The same psychical mechanism is apparent when stammering is accompanied (as it often is) by what is called embolophasia. Here the stammerer uses explosive words which have no connexion with what he is saying. These words are cunningly used like a spring-board to give impetus to the stammerer to help him to ' leap ' over words which he finds difficult.

So far as gestures and movements are concerned, it is usual to distinguish mere movements of the body from movements which are accompanied by sound. In these cases the sounds take the form mostly of single letters, —most frequently N or R—and it is always quite easy in psychological treatment to find the reason for the choice of one letter or the other as the case may be. Since the sound is always put in before the difficult word, the object which it serves is clear. It is a case of the ' spring board ' over again. For illustration we will take the case of a twenty-nine-year-old patient who had been in the habit of using a long drawn out ' R ' . . . when the first letter of a word caused him anxiety. Up to his sixth

year he had suffered from an inability to pronounce the letter 'R.' At home he got round this difficulty by slurring or seldom using the 'R.' At school his teacher frequently reproved him for his faulty pronunciation. The result was a double one. He got cured of his failure to pronounce 'r,' but as he was an ambitious and rebellious boy his behaviour towards his teacher became as bad as possible. As a result of constant clashes, it came about that during his first school year the youngster developed severe discouragement—and shortly after a stammer. As his impediment of speech grew worse during the following four years the boy developed a tendency to say a long-drawn-out 'R' . . . before difficult words and thus to get round the hindrance. The explanation is simple. The boy had had an earlier difficulty over which he had triumphed in his sixth year, and he was unconsciously using the recollection of this as a 'memento' to help him round his present impediment. The technique of the process was clearly shown in a dream he had during treatment for the stammer. He dreamt he was being chased for some escapade he had been in. To escape he was obliged to get over a fence two yards high. With the help of a run he only succeeded in jumping up about one yard, but as he hung in the air he brought out 'r—r—r——' several times, and was then able to get over the fence quite easily.

Among the functions that subserve the psyche's protective tendency besides anxiety, *Anticipation* which has already been mentioned several times plays a prominent part. It works not only by feeling beforehand the emotional effect which a situation is likely to cause, but also by continually keeping an open eye for the possible advent of a difficult word or letter. During speech an increasing conflict goes on in the psyche—the stammerer

has constantly to make up his mind whether he has the courage *directly* to face the coming difficulty, or whether it will be safer to '*go round it*' by the substitution of another word. As his strong discouragement causes him to be inclined to go round a danger rather than face it, he will probably choose substitution, as this diminishes the intensity of the impediment in his speech. Should substitution be impossible—as for example when buying a railway ticket—the impediment will be particularly severe.

Which letters a stammerer will find difficult is psychically determined, qualitively and quantitively. A change of the leading fiction usually results in a partial or complete change of such letters. To discover how the psyche has marked down these letters, like mementos, sometimes entails much trouble. It is sufficient to observe that they all serve the same purpose. They act as monitors to warn the stammerer at any moment that if he ventures on action he must proceed only with the greatest caution. As a rule the mental connexion at work here is an entirely individual one, and can only be discovered from the patient's dreams. Not seldom, to take the trouble to find it out becomes unnecessary because of the improvement which takes place in the patient.

Having regard to what has already been said, there is no need to lay special stress on the fact that a chronic stammer of mental origin is always the expression of a dread of life which has grown out of the feeling of personal failure and inferiority. The sense of inferiority is always the *Primary* cause, and not as stammerers think, and nearly all writers state, the secondary cause and the result of the exposures which the stammerer has suffered through his stammering. It is very important to make the stammerer fully realize his mistaken ideas on the

subject if he is to be prevented from retiring along his usual line of retreat—that 'the stammering is responsible for everything.' That usually the sense of inferiority is more acutely felt when the stress is of long standing is only in small part due to the discouragement of repeated exposure and failure. It is rather true that the whole protective 'nervous' system becomes more and more fixed with practice and as a result the natural finalities are more and more reversed. Thus, the personality, which in spite of all the protective 'brakes' supplied by the stammering feels itself endangered and exposed, is compelled to reverse the finality of fear—an emotion which was designed in the interests of biological finality—and to use it in conjunction with stammering for the protection of the threatened personality. This extension and misuse of the emotion of fear results in shocks to the whole of the psychophysical organism which do much to strengthen the uncertainty before life of the individual and his sense of inferiority. The continued practice also of the protective symptoms is bound to underline the sense of inferiority, for their whole object is to complete the withdrawal of the stammerer from all the claims of life. With this object not only will new barricades be erected in the form of 'difficult' words and letters, and owing to the division of the psyche antithetic thinking increase, but logic itself will be corrupted. Thus normal men try to make the logic of thought follow logic of fact, but the neurotic tries to avoid the logic of life in the interests of his protective nervous tendency against life. Carried to its conclusion the development of stammering would therefore end in Dumbness. Happily such a conclusion is usually prevented by some remnant of social feeling that remains except in very exceptional cases in the stammerer's mind. It is by means of this remnant that

therapeutic treatment must carry out its work of salvage.

Till recent times it was not realized that stammering of a mental origin was the definite product of mental forces, and it was regarded as not much more than a mere mark of some deficiency or lack of faculties. As a consequence of this old mistaken view the old assumption still lives on that the apparent deficiency or lack can only be removed by giving the patient 'extra coaching in the subject.' No trouble was taken to find out whether the stammerer 'ought' to be able to speak in a situation when his personality was exposed, although an enquiry in this direction was obviously required by the fact, known to every specialist, that stammerers when by themselves, that is not in contact with other persons, can speak quite well. The conclusion that we are here concerned with a deep-rooted disturbance of the whole system which constitutes the Individual had been drawn by no writer on the subject.

The development of the sense of social instinct is seriously hindered by stammering because the stammerer's erroneous purpose in life causes him to measure himself in an antagonistic attitude against his fellows and to depreciate them all as a result of this, whether they are above or below him. If it is a superior to whom he must speak, he will go to any lengths to avoid him; if an inferior, his exaggerated sense of his own personal value will at once appear. The impediment in speech is indeed designed to cover the stammerer's retreat before a superior. The following simple example will make this clear. When two normal men argue a point together, both will desire to discover the truth. Quite otherwise with the stammerer. His only aim in argument is to establish his superiority over his opponent. If he remarks that his opponent has arguments at his disposal

better than his own, and is thus 'above' him, he will without delay retire back to his sense of inferiority and automatically produce his stammer, which the compulsion of his false aims now makes necessary in the situation which has arisen. He will now suddenly notice that he is now quite mastered by the stammer, although a moment ago he was speaking in a way that was for him quite smoothly. Having no insight into his own psychic processes but being compelled to raise himself from the despondency caused by his sense of inferiority, he will do so by the comforting thought: 'I should have easily saved the situation if that unexpected stammer had not hindered me.' He does not know that by using this hypothesis to salve his sensitive sense of self-assertion, he has again fallen a victim to the mistaken idea which we have here been criticizing.

The denial of his inborn sense of social instinct is the mental equivalent of the feeling of emptiness that surrounds and isolates the stammerer. The knowledge is not his that it is only people who have developed their social instinct to the uttermost, who are able to go joyfully into life and to perfect their capacities for acting with freedom and courage. That which obliges him to throttle this instinct is, first, his conviction of his own want of value which leads him to shrink from closer contact with his fellows, and, second, his struggle for exaggerated self-assertion which obliges him to think only of himself and to neglect others.

The throttling of the social instinct is such an important part of the structure of stammering, that the gradual decrease of the throttling can be used to measure the success of therapeutic treatment. This is not surprising when we remember that an improved respect for others must necessarily carry with it some modification of the

constitution of a self which has only existed for its own exaltation. This modification is to be observed in dreams. Dreams during treatment can be looked on in some sort as an acid test of progress. Thus a symbol is often used by stammerers in dreams which shows the difficulty of 'the discouraged' in obtaining contact with their fellows. This may be described as the 'Bridge problem.' The dreamer sees himself alone (an expression of his isolation). He is on an island or on a river bank and wishes to join the people he can see on the other side. But he notices that the bridge which he must cross to reach them is either unusable or at least in so bad a state that to cross by it appears a perilous adventure. In bad cases it is quite usual for the stammerer shortly after the beginning of treatment to indicate his defeat in social feeling by dreaming that the bridge consists of columns only, without any arches at all. The meaning of the dream is this: 'I cannot and ought not to cross over to my fellows unless I can do so without endangering my life.'* With progressive amelioration of the nervous condition a similar dream will appear with the difference that—the bridge will be more nearly completed and even become safe to cross. In general, as the sense of social instinct and courage grow, the 'Bridge problem' will be solved in a positive sense. In the same manner the patient will gradually free himself from the results of years, perhaps of tens of years, of negative training in the protective tendency.

As regards the mechanism of stammering, most authorities are at one. It is a disturbance of co-ordination, which is described, e.g., by Kobrak as a failure of the opening muscles as against the closing

* This is called 'Junctim.' This word is used for a joining together of a thought and feeling complex, which is used by the protective psychic arrangements to strengthen the emotional tone.

muscles. This agrees with the result of the individual-psychological theory that all stammerers express *at the same time* ' yes ' and ' no ' : The stammerer wishes for contact with his fellows, but at the very moment of his wish in dread he interrupts the process. Should he find himself in a position of inferiority then the ' protective ' ' No ' shows itself much the stronger. This mental conflict must naturally have a bodily symbol which is expressed in the disturbed co-ordination. The preponderance of the ' No ' acting as a brake will innervate the closing muscles too strongly. Because of the stammerer's insufficient readiness to maintain contact with his fellows the opening muscles more or less fail to work. In full agreement with this conclusion is the repeated observation that with nearly all stammerers the critical point is at the beginning of conversation, i.e., the moment at which contact has to be made with the person to be spoken to is the moment when the power of the ' No ' is most intense.

The same psychic conflict appears, moreover, for people of normal speech in the form of the occasional stammering of agitation or of fright, in ' diplomatic stammering,' in cackling talk, and so on—the dominance of the ' No ' over the ' Yes ' is always the result of some failure in courage. In such cases we have to do with people, whose courage has failed under the pressure of a load so that they no longer trust themselves. These cases were mentioned at the beginning of this chapter, and they have in them the basis of a neurotic character. This basis must always be presumed to exist where agitation, or some similar emotion, is able to disturb the balance of the normal bodily functions, including speech. In any alarming experience there will usually be an inner ' retreat ' from the reality which appears to endanger

life. Now speech presupposes a positive turning towards life. It confirms our conclusions therefore to find that the functional disturbance under the influence of a fit of fright lasts just as long as does the inner retreat or the fright itself—which is the ' No.'

The ' diplomatic ' stammer and cackling talk also reveal unmistakably the same lack of courage and fear of insecurity. (See Balzac's ' Eugenie Grandet ' for a very interesting example of diplomatic stammering.) When anyone by cunning tries to mislead his opponent into betraying his intentions, there can be no doubt that want of power to succeed by straightforward means is the reason for his method. Cunning is invariably a weapon of the weak, who dare not go straight. Of stammering over a lie the same holds good. It is invariably rooted in a feeling of weakness. All these and other cases of uncoordinated speech can be traced back to one and the same cause—Discouragement. It is the same influence—discouragement—in a dynamically stronger form, which brings chronic stammering of a mental origin into being, and keeps it going when there. For cure there is but one therapeutic word—Courage. The question in what way and by what means the courage of the stammerer may be improved will be discussed in Chapter VIII.

CHAPTER VII

FURTHER PRACTICAL EXAMPLES

IN the treatment of disturbances of the function of speech of a mental origin, it is even more true than of other neurotic troubles that the root of the evil will be found in some exaggeration of the sense of uncertainty which arose in infancy. This according to the facts discovered by Individual-Psychology is the beginning of every neurosis. Of the intensity of this sense of uncertainty it is easy to form an opinion, by questioning the patient as to the situation in which he feels his trouble most seriously. It is usual to find that the stammerer finds that he can speak all right, so long as his capacity of intercourse with others is not in any way strained. An apparent exception is to be found in the few cases in which a patient—as a consequence of introspective brooding over imaginary positions of inferiority —stammers when by himself.

In severe cases the discouragement reaches such a pitch that the stammerer is unable, for example, to speak to a dog. If his self-esteem has not fallen quite so low as that, a grown-up patient may have enough courage to speak fluently to children under ten, always provided that the children are not unusually self-assured or aggressive; for if they are the sense of inferiority reasserts itself and the stammerer at once loses his ease of speech.

The degree of difficulty which a stammerer feels often varies according to whether he is speaking to male or female persons. This circumstance may be used as a perfectly reliable clue, to discover whether the discouragement originally arose especially as a result of opposition to the father or to the mother.

We have seen in the last chapters how the stammerer has gradually grown into his trouble, and how he has acquired a personal interest in maintaining the condition. We have also considered the urges which have led to the symptoms becoming fixed in the child, and we will now proceed to typical examples of the continued influence of these urges in the case of older stammerers. To make a survey easier, the cases are divided into three groups.

By far the greater number fall into the first. They are those in which the protective impediment of stammering is employed as a weapon of attack and defence, where there is a want of sufficient courage for more straightforward methods, and in which the symptom is used by the subject as an expression of his deep-rooted rebellious attitude towards those who are stronger than himself.

1*st Group.* One example of many.

This was a severe case. It concerned a young business man of twenty-eight. He was of herculean build and he was obviously concerned to prove himself sound of mind and body, and that it was only ' this unavoidable impediment of speech ' that prevented him practising his calling. It was not however only the impediment in speech that betrayed his loss of contact with his fellows, but also his hesitating gait, his timid look and the limp carriage of his head ; these all went to show that he had lost all confidence in himself. It soon transpired that

the patient had completely dominated his mother, as well as a sister two years his junior. His father, a sergeant-major of cavalry, did not confine military discipline to the barrack square ; he also enforced it in the home. There were frequent quarrels between the parents, which the children witnessed. Except upon his permission none of the children was allowed to speak in the presence of their father. He was gentler with his daughter, but the son was brought up on strictly military lines and with a complete lack of sentiment. The dejection caused to the boy by his feeling of powerlessness in the presence of his father is shown in a dream which the boy remembered from his sixth year. ' I am standing by my father in the sitting-room. I have my head in my hands and am looking at it to see if it is clean I put it on again thinking that if one had to one could get on just as well without a head : it would just prevent having to speak.' The beginning of the dream concerned the epithet of ' dirty blockhead ' that his father was fond of hurling at him. His father had also frequently threatened him with cutting off his head on occasions when he had ventured out a little by himself, and thus transgressed one of his father's Spartan rules. Out of the significantly remembered dream it is easy to deduce the tendency that was preparing a way for itself in the child's psyche. It was something like this : ' My head is all right ; it is not dirty. How would it be if I were to fight my father with his own weapons when he treats me hardly, and behave " As If " I were headless, so that I could not speak.'

The patient had a clear recollection that at this time, when with his father, he suffered from unpleasant sensations of a restriction in his Adam's apple and the upper part of his thorax. This is noticed in many children

before the onset of real stammering. In this case the stammer set in about a year later. The father was in a violent rage with the boy over some trivial offence. He boxed his ears, treated him unmercifully, and brusquely demanded an explanation of his conduct. The child was unable to produce a sound—he was headless and speechless.

It became clearer and clearer in the course of treatment that this masochistic (taking pleasure in trouble) behaviour was developed later into one of his most important secondary lines of fiction. He had also used the idea of beheadal as a *junctim* for the purpose of increasing his dread of speech.

He now found himself in possession of means that enabled him to escape on the score of his stammer from any errands which his father might give him. Neither did he neglect by means of 'headlessness' to cross his father's plans at every turn. This showed itself plainly at school. In the first four classes of the elementary school he had done quite well. At ten years of age the idea came to him that he would like to be a locksmith, but his father thought otherwise. He decreed that the boy should become a merchant as more 'high-class.' Accordingly the boy was sent to a grammar school much against his will. The sequel was as follows: His former eager interest in his school work rapidly evaporated. He became so 'scatterbrained' that at times he could not even remember his tables. In grammar the introduction of Latin terms to denote parts of speech made it almost impossible for him to follow. With Latin it was even worse. In learning this he could not distinguish between subject and object—if the object happened to be a person. In many different ways his 'solipsistic' (self-centred) standpoint made difficulties for him. He was only able

to see himself as subject. The possibility of being himself an object he found intolerable, and he brought all the power of his personality to bear on its denial.

As was to be expected he failed to reach the form standard. Another term in the same form resulted in another failure, and the boy was sent back to the elementary school. Here once more he did well, and so his father came to the conclusion that his failure at the grammar school must have been due to the Latin, and he removed him to a secondary school where they taught no Latin. But troubles soon arose again, and after periods of being tired right out that drove his father nearly to despair the boy once more failed. The boy then left school and was apprenticed to a merchant's business. Here the hidden fight with his father followed the same lines. The boy did his work awkwardly and apparently found it too difficult. Moreover he put the screw on with his speech brake to such purpose, that on more than one occasion the apprenticeship was nearly broken off because the boy was unable to speak to any one in the office.

During the war he served for fully four years in the field artillery, without, it may be remarked, developing any form of war neurosis. On returning to civil life he changed his job and became an assistant in a railway workshop, thus getting back near to his old idea of being a locksmith, and remaining true to his plan of crossing his father's designs for him. In the course of treatment, as his antagonism to his father and therewith his neurotic symptoms gradually disappeared, backed also by a promise from his father that he would never again interfere with him, he finally resolved to go back to a profession which required more learning than a locksmith's.

2nd Group.

The cases belonging to the second group differ from those of the first, in as much as the stammer is used in them mainly for an exaggerated *organic benefit-gain*. Children nearly always discover that illness may be made a pleasant means of counteracting in their environment the mental effect caused by some bodily infirmity, and they may hold fast to it so that it becomes a neurotic protective symptom. In such cases the feeling of incapacity is already strongly marked and the need for help from others proportionately developed. The continual anxious dread that he may be overlooked or thrust into the background gives the child the initial impetus which makes him employ any means that seem serviceable, including functional weaknesses, to draw the willing or unwilling attention of others to himself.

In illustration we will take the case of a thirty-two years old engineer. He had shown symptoms of stammering as early as three and a half years of age. As the diary of his mother proved the child had suffered at eight months from an attack of Bronchitis so severe that his life was endangered. There were recurring attacks at short intervals culminating in nervous Asthma. The patient had a brother five years older than himself who began early to suppress and snub the younger child in every way possible. The elder son was the open favourite of the father who, as a rule, only troubled about the younger on occasions of illness. Then he lavished all his care on the sickly child. The small patient thus learnt only too soon to understand the influence of his ill-health on his father.

This was the situation when the patient, otherwise a lively child, showed the first symptoms of a stammer.

He was destined for the teaching profession, and the father began at once to take trouble with what was at first only a slight difficulty in speech. The mother paid no attention to it. Daily speaking exercises were continued regularly for several months without effect ; but when in the summer the mother took both children into the country—the father for business reasons was unable to accompany them—the stammer disappeared in a few days of itself. As soon as the child returned home he began to speak badly again and his father took the matter in hand anew. Without doubt the relapse was due to the child's desire that his father's attention should be occupied by himself rather than by his elder brother.

As soon as a child realizes that a stammer may be made a working means of heightening his sense of personality in relation to those who are stronger than himself, he will begin to employ this and similar '*help demanding*' gestures for other purposes. This is specially true when the element of hidden rebellion is present—open rebellion is rare in subjects belonging to this group. In the case we are considering the difficulty of speech, which increased as the boy grew older, was used to enlist the pity of others round him and to persuade them to expect little of him and not to subject him to heavy tasks.

In the course of this patient's school career his trouble increased to such an extent that his father realized that his choice of teaching as a profession for his son was doomed to failure. Later the boy elected to follow a technical calling. It transpired during treatment that his choice was really made simply because his brother was 'over' him in technical matters. Since then he was out to beat his brother all along the line, his ambition left him no course except to choose the technical school.

One pattern of his method of automatic thinking and

feeling was as follows: So soon as he had to speak he imagined himself to be a feeble child who, with laboured breath, has just finished a race in which he has been thoroughly well beaten. This fiction frequently occurred to him in dreams especially when a task faced him that he did not feel qualified to discharge. It will be seen that the patient had re-established the earlier mental state of childhood in regard to his brother, with whom he was once more placed in competition. It only required a slight retouching of the picture to make the search for protection serviceable in the new circumstances. It will be found where there is extensive retouching of such fictional pictures in the direction of intensifying the effect, that this is done with the design of strengthening the emotional tone. Similar fictions grounded on situations in early childhood in which the feeling of powerlessness has been experienced are found in all cases belonging to this group. In the subjects of this group, who desire before all things to excite the sympathy and notice of others, a strong disposition will be shown to compensate for the deficiency in speech by over-production in other directions, which are intended to seem brilliant. Here belong attempts at 'secret language,'—the adding of strange prefixes and suffixes to substantives and verbs to create the impression that the child is master of a strange language beyond the understanding of the grown-up. In clear cut cases of 'Negativism' the turning round of words will generally be preferred. At times no one can help being astounded at the skill (amounting to a virtuosity) displayed by stammerers in reading any printed matter backwards. Glossolalia also is found here sometimes in an early form.

3rd Group.

Patients of the third group differ from those in both

the other categories in the fact that the initial impetus to the growth of the trouble was given by some neurotic protective tendency. In these cases the stammer usually appears between the ages of ten and sixteen but as might be expected, neurotic traits of sensitiveness, strong desire for personal self-assertion and either an open or concealed propensity to rebellion will have been exhibited in early childhood. The immediate cause of the failure in courage will usually have been some serious blow to the patient's ambition.

A typical case is the following :

The patient, twenty-seven years of age and a lawyer by profession, was the youngest child of a family of seven brothers and sisters. The stammer began at the age of fourteen. During his earliest youth there had been frequent fighting and quarrelling between himself and his elder brothers and sisters. He dominated his mother, while he sought to assert his importance before his father by a cringing obedience, not entirely however without moments of rebellion. He did well in the elementary school. But in the higher school he failed in the third form, a ' defeat ' that grew to formidable proportions in the boy's thoughts. By way of compensation he developed an attitude of aggression and made himself the speaker of his form. Two years later—he had meanwhile (by way of compensation) developed a very aggressive manner and made himself the spokesman of his class—he had a very heated argument with his form master in the course of which the latter threatened him that if he did not amend his arrogant behaviour he should not be given his remove at the end of the school year. Shortly before, the family prestige had received a severe blow because the father had become insane and had had to be removed to a lunatic asylum, The boy not only felt the disaster

as an insult which fate had dealt to him personally but he began to dread the result in his own future. At this time he became addicted to onanism which brought him serious troubles of conscience.

A few weeks after the critical scene with his form master the stammer declared itself during a Latin Class taken by the same teacher. Later, when he was under treatment, the question was naturally asked him whether he could recollect what word had first given him difficulty. The answer was in the affirmative, but he was unable to pronounce the word itself. After many attempts he wrote it down—' Optimus.'—Comment is superfluous if we remember how large a part is played in every neurosis by overheated ambition and the underlying discouragement.

The case was thus a simple one. The ambitious boy had failed once in his form and had not been able to get over the defeat. Then followed the nightmare dread of a repetition of the defeat—even if only conditional—in the threat of his master. In the course of the dispute, the master had shouted to the boy words which he remembered as : ' hold your tongue or you will see what will happen when the removes are given.' The dreams of this patient revealed that he had converted this warning into a categorical imperative firmly planted in his mind in the form of a restrictive fiction.

In general the cases of the third group present an easier problem, as discouragement in early youth has been less intense. As a rule their cure takes a correspondingly shorter time.

We do not wish to be understood to hold that every case of stammering can be definitely assigned to one of the three categories given. Pure examples that can be so treated are comparatively rare. As a rule cases are

mixed. In the construction of the restrictive mental conditions features may have been borrowed from any one or more of the groups. Most writers make a separate group of those cases in which the stammer can be traced to imitation. We cannot see the necessity. The importance of the '*Where to?*' is far greater than that of the '*Where from?*' for the understanding of the dynamics of the psychoneurotic. Contrary to the general opinion cases in which the beginning, assuming always that there is already the basis of the 'nervous' character, can be ascribed to imitation are relatively rare. In a long experience we have only met with two cases purely of this type.

In the first case a boy of five had copied the stammer of a playmate. The boy's father had often taken the little stammerer on his knee and patiently tried to make him repeat words without stammering. This did not please the small son, who wished to stand first with his father. He began consciously to imitate his playmate with the intention of making his father treat him in the same manner. His father scolded him sharply. However the boy continued to stammer and now did so unintentionally, having fallen a victim to his desire to assert his own importance. Moreover the child was compelled by the inner necessity of his self-assertive attitude to use the stammer to defy his father so as to avoid yielding to him.

The second case was of an excessively timid child of nine who had long been in the habit of attaining his desires by neurotic means. He observed that a schoolmate who stammered was not made to answer questions in class as the teacher wished to spare him as much as possible from the humiliation of his impediment. It did not take long before he had also acquired a stammer, with

the fatal result that he also sat as silent in class as his model.

In both these cases it is clear that imitation did not provide the urge which released the stammer, but that this was due to the secret aims of the child's mind—self-assertion before the father in one case and a protective tendency against the teacher in the second. In other words the stammer was due to mental constitutions of the kind which we have shown above to be characteristic of the second and third groups of cases.

CHAPTER VIII

THERAPEUTICS

AN essential of successful treatment is the clear realization of the manner in which the stammerer has built round himself a complicated system of psychic reactions which is intended to protect him. To use a metaphor, treatment begins as with the cracking of a nut; the hard shell must be broken before we can penetrate to the kernel. By proceeding too violently, for instance, by using a hammer, we shall spoil the kernel. Even if we use a nutcracker, a tool specially fitted to the purpose, we may still unfortunately do some damage, unless we proceed with reasonable gentleness and delicacy. No risks ought, therefore, to be taken and any tool used must be used most carefully.

So with the cure of the stammerer. It is necessary to approach the treatment of the patient in such a way that he suffers from no sense of compulsion under the treatment, whether consciously or unconsciously. To this end the doctor* must behave like a friend to his patient. He must create the impression that he is on his side, not against him, and avoid all airs of authority or superiority. The desirable friendly atmosphere will not be achieved if the doctor allows his superior knowledge to create a distance between himself and his patient; he must rather assume an attitude of relative ignorance. Nothing tends

* The person giving the treatment will be referred to as a doctor.

so much to lessen the ' pathos of distance ' for ' discouraged ' patients as the assumption of an equal standard of knowledge.

Let there be no mistake about it. A selfless attitude (which is necessary to successful treatment) will not be thoroughly acquired merely by the practice of an understanding, sympathetic or deliberate manner. The doctor's whole mental attitude must be such that he at once reacts naturally and with no effort to the patient's point of view. This involves a transformation of the whole mind and the complete realization of the dictum of Pestalozzi : ' Everything for others, nothing for oneself.' To be really competent the doctor ought also to possess a wide knowledge of men and a lively interest in life, or he will not be able to bring to bear the sympathetic understanding of his patients' difficulties which is necessary, if he is to grasp the deep-lying and characteristic disturbances from which they suffer in trying to maintain a balance between demands of the self and the needs of the community. Without this equipment, the doctor will not be able also to act the part of ' mother ' to his patients ; to make them give him their complete and utter confidence and so facilitate their return to a free and healthy life in the community. The more that a doctor knows about his work and the more he realizes that the greatest thing that a man can do is to sacrifice himself for the good of another, the more efficiently he will be able to help stammerers, for he will then have at his command a supply of courage and goodwill sufficient to bring back to self-reliance these ' discouraged ' souls who have lost faith in themselves and to send them in good heart back to the battle of life.

The doctor must realize that he has got to ascertain the faults of his patients. This is only possible if he remains

equable, patient and untiring and shows himself a good comrade, and avoids everything which might hinder the diminution of the discouragement or awake ' the manly protest ' in the mind of the stammerer. He has got to understand the many various forms in which discouragement may be expressed. By sympathy and intuition he must be able to strip away all that is accidental or irrelevant, and grasp the kernel, i.e., the aims which have gone to form the individual's life. He will then be able to see through the whole of the patient's style of life with all its erratic appearances, and he will know beforehand what is hidden in all its dark corners ; and if he has had enough experience, he will be able to argue out with his patients like a good friend all the pros and cons of their conduct. In all that he does and says he must never forget that his object is to make a discouraged stammerer once more fit for life. If he keeps steadily to this essential point of view and has made really his own the whole frame of mind which we have been describing, the doctor need not be afraid of making any very serious mistakes in treatment.

As regards treatment—it is worth giving an outline of what has to be done. Quite broadly this outline may take the form shown below in which the neurotic qualities of the stammerer and those which ought to be substituted for them are arranged opposite to each other. Thus :

	Neurotic quality.	*Substituted quality.*
(1)	Feelings of Inferiority.	A sensible attitude to the problems of life based upon the consciousness of equality. A proper understanding of the facts of life brings with it the sense of responsibility.

(2)	Discouragement and an egocentric tendency to compensation.	Courage and the will to act and do.
(3)	Over-compensation. Fictions of pre-eminence and heroism.	Aim of usefulness for the common good.
(4)	Neurotic 'protective' symptoms (stammering, anxiety, etc.)	Adaptation to the needs of the community.

Shortly stated, then, a thorough conversion of the stammerer has got to be effected. Courage has got to be pumped into him. His social instincts have got to be aroused. In other words the patient must be induced to give up his private system of relations with all its mental brakes and impediments in favour of a system founded on social feeling, which relies for protection only upon its adaptation to the needs of the whole. These substitutions of motives cannot, of course, be brought about one after the other, but must all go along together. As the treatment proceeds, the patient will appreciate more and more clearly what unconscious (or rather, not understood) mental processes had combined to create his stammer, and this very appreciation will act as a lever to lift him out of his neurosis and bring about the necessary substitutions.

The discovery of the neurotic plan of life or 'neurotic will' is only possible if the doctor, with the help of all his experience, is able to obtain an intuitive insight into the inmost being of his patient. Patient and doctor must

co-operate on a footing of frank comradeship and mutual confidence. To demand blind trust from the patient—an indispensable presumption of suggestive treatment,—is not here advisable. Especially in cases where the pressure of parental authority has been strong, the doctor should make no demand on the patient for trust, but should rather recommend him not to accept any statement on trust till he has verified it for himself. This will prove the easiest method by which to rid the patient of his deep-rooted distrust, and of his opposition to every form of compulsion.

The doctor should try as soon as possible to form some provisional idea of *how* the stammerer began his trouble and *on what grounds* he is (unconsciously) interested in its continuance. In doing so he may and must make use of the discovery that neurotic symptoms are always the protective covering which the patient has chosen for himself. With sufficient practice in the use of this teleological standpoint it is usually possible even at the first interview to distinguish the main outlines of the mental portrait of the patient in fairly correct proportion and perspective. The details will be added, as treatment proceeds and as further study brings to the surface the true motives of the ' nervous ' will.

To gain this first insight into the mental life of the stammerer, it is necessary to know all about the history of his complaint from the point of view of Individual Psychology. In my experience the effort to remember it should be directed as follows :—

(1) *Impediments of speech.*
When the patient began to stammer ?
What were the circumstances (mental and physical)

of the patient at the time stammer was first noticed ?

Were there symptoms of ' initial ' stammering during the early development of the speech function ?

If so when did they disappear ?

Was the patient in early childhood addicted to bed-wetting, nail-biting, grimacing or other childish tricks ?

What are his earliest recollections ?

Did he have frequently recurring dreams of falling, flying, being hindered, imprisoned or anxiety dreams ?

Does he day-dream ?

(2) *Character.*

Has the patient, or had he as a child, fear of the dark or of being alone ?

Does he try to avoid difficulties ?

Is he unusually cautious ?

In what respect is he (apart from his stammer) particularly wanting in courage ?

Which persons in his environment have been especially instrumental to his discouragement ?

Does he feel himself pushed into the background ?

Did he betray want of self-reliance or was he in earlier years rebellious over eating and going to bed, dressing or washing ?

Was he as a child careless or awkward ?

Did he ' make slaves ' of the people in his environment ?

Is he markedly self-centred ?

Is he very sensitive ?

Was he often made fun of ?

Is he vain in respect of his clothes, his person or his hair ?
Did he as a child make friends easily or was he inclined to be solitary ?
Does he want to lead and dominate his companions ?
Does he show signs of a strong tendency to depreciate others ?
Is he easily jealous ?
Does he show a great inclination to thrust himself forward ?

(3) *Organic inferiority.*
Does he or did he as a child suffer from any bodily weakness ?
Did he learn to walk and speak at the normal time ?
Is he unusually good-looking or ugly ?
Is he left-handed ?

(4) *Family constellation.*
What is or what was his behaviour to his parents ?
Does he show a marked dependence on either father or mother or grandparents ?
Who carries most weight in the family ?
Where is he placed among his brothers and sisters ?
What is the difference of age between brothers and sisters ?
Are they or were they quarrelsome ?
What were the social and economic circumstances in which the patient grew up ?

(5) *Education.*
Was the education of a strict, spoiled, nagging or ambitious type ?

Was the patient frightened in childhood about facing life ?

(6) *Conduct at school.*

Does he or did he go gladly to school ?

Before he goes to school does he show himself hasty-tempered and excitable, especially before examinations ?

Does he ' put off ' doing his school work ?

Does he often trifle ?

Does he depend on the help of others in his work ?

Does he show ambition ?

Does he read unusually much ? If so, what type of literature attracts him ?

In what subjects does he fail more or less ?

Does he start to do a great many things and drop them as soon as he meets with difficulties ?

A complete answer to all these questions will very seldom be arrived at in one sitting. That does not matter. But it *is* important that the Psychotherapist should have a clear conception of the answer to each of the questions raised. With sufficient practice he will be able to elicit the points needed to understand a case in the choice of an easy conversation without adhering strictly to the questionnaire. In every case there emerge two points of capital importance ; (first) the circumstances in which the stammer first appeared and (second) the fictitious aim on which all his motives and expressions of life are aligned. If the ' leading line ' which teleologically determines the patient's mental life has once been grasped, it will be relatively easy to find out at what point he has first come into conflict with the ' logic of facts.'

To demonstrate forcibly the oppositions contained in

the neurotic system of relations, it is advisable to get the patient to take a greater and greater part in the conversations during treatment. The doctor should not do all the talking, but behave like a good friend. The patient will thus soon become accustomed to examine in the light of his social instinct the erroneous conclusions, which he drew in early childhood from his false estimates and wrong generalizations, and come gradually to correct them. The same holds good with regard to the ' private ' philosophy of the neurotic patient which is usually exactly fitted to his affective character. Treatment must be directed towards revealing more and more to the patient's conscious intelligence the lines along which his neurotic tendencies in thought and action have been developed.

Questions as to childish memories and past dreams often help to throw a flood of light upon the situation. This is particularly so in cases where the patient in childhood has created an excessive compensatory self-assertiveness by which he was obliged at some particular point in his life to break off and draw back defeated. It will be found in such a case that he began quite early to train his thoughts to serve his protective tendencies and so to avoid the logic of facts. Even after a few sittings with a patient it is possible (with experience) to assemble the bits and fit them into a mosaic picture, which shows the child at an early stage moving in an enchanted circle, and prevented from escaping from it by the discouragement which has already taken possession of him and by his sensitiveness to any blow to his pride. Because the cure of an impediment of speech depends on the reformation of the patient's plan of life his egocentric system of relations has got to be shaken to its foundation. This must therefore gradually be explained to the patient, and

may best be done when a natural opportunity occurs in the course of the treatment. It would take us outside our limits to give details, but the following are the main points:

(*a*) *Discouragement.*

The patient must be shown how his discouragement arose and how it has so arranged his style of life, that he is driven to protect himself by the subterfuge of a stammer. Should he belong to the type of 'spoilt' children he will quite surely have acted very early in a characteristically cowardly manner. It will be easy to prove to him from previous conversations how, compelled by his fictitious aims, he displayed the tendency quite early of avoiding difficulties rather than of facing them. By reference to the bi-polarity of mind (i.e., the manner in which it swings between opposites) it can be explained to him how this avoidance of difficulties must have been the result of a heightened feeling of inferiority on the one hand, and on the other of a compensatory striving for self-assertion, and how the over-emphasized desire for self-assertion led directly to the strengthening of the impediment, while the fear of injury to pride effectually prevented any development of courage. The patient must also be made to recognize that from childhood he has lived in a vicious circle and that he has now got to get out of it. The want of courage has too long led to a want of performance, and the want of performance has conversely increased the want of courage.

(*b*) *Stammering.*

In the same way it must be explained to the patient *why* he stammers. For children explanation by similes

is useful; e.g., that when they meet other people they behave like a chauffeur who cannot move his car because every time he starts it he at the moment puts on the brake; or that they are like some one who shuts himself into a room and only opens the door a crack, says a word or two and then shuts the door again so that the end of his sentence is not heard.

A young child will also easily understand the following illustration of the process involved in speaking. When mother wants to make a cake she will take dough and a cake mould. The dough is the necessary part of the cake as the cake can be made without the mould though in that case it will be formless. Speech consists likewise of a form (the letters) and its contents (the voice itself). Just as the mother cannot make a cake if she puts the empty mould into the oven, so no one can produce even the fraction of a syllable if he only moves his jaw, tongue and lips. As in singing so in speech the necessary part is the voice and it is not necessary to trouble about the letters in the least.

Even to grown stammerers it is better not to say much more than this on the subject of the process involved in speaking lest his attention be re-directed to the act of speech, the automatic production of which has already been unduly interfered with by an over-watchful consciousness.*

It is just this excessive preoccupation and anticipation which has to be eliminated if cure of the speech trouble is to be made possible. In accordance with this principle

* The inhibiting influence of the control of the consciousness can be best illustrated by the fable of the frog and the centipede: 'As the frog annoyed by the vanity of the centipede begged the centipede to tell him why he was so proud of the number of his legs, the centipede felt bound to walk very carefully. But when he saw how many feet he had he became so muddled he was not able to move from the spot.'

the doctor must avoid any open notice of his patient's difficulties; although he must naturally leave him in no doubt that he perfectly understands both him and his troubles. He must do all he can to persuade the patient to realize more and more that he makes use of his stammer to make all the possible difficulties which he may have to face as small and as numerous as possible, and either to avoid or at least postpone every decision and every event that might possibly affect his sensitive personality. The point of emphasis is to make it clear that the stammer is a weapon of offence and defence used by a discouraged ambition before an anticipated defeat, and that it has been devised by the patient himself as a protection against dangers to which his feeling of inferiority may lay him open. His fundamental errors of thought will only be eradicated by the realization that the disturbance of speech is a *consequence* of discouragement and of a timid avoidance of the obligations that life lays on every individual. It is of the utmost importance to show to the patient over and over again that he has systematically lived a lie. It is *not the stammer* that obliges him to put the brake on *but his own discouragement.* The stammer is the servant of the discouragement and it is not true as he thinks that the discouragement has been produced by the stammer.

In the course of conversation the doctor must make it quite clear to the stammerer that the use which he makes of speech as a 'brake' is purposive, and that the habit will remain part and parcel of his mind so long as he considers it necessary for the protection of his feeling of personality in his dealings with others. It may be conceded that the stammer is 'intelligently' arranged, for the stammerer is (teleologically) bound to act under his own self-created law, and the doctor himself would be

hard put to it to discover a means better designed to act as a protection to a sensitive personality and to avoid the obligations of life. An appeal to common sense ought to be coupled with this concession, for it is clear that the 'intelligence' employed in the construction of the stammer is of a very limited and private kind and quite opposed to reason and the general judgment of mankind. 'Speaking' is to place oneself in association with another, while 'stammering' is to wish for but at the same time to refuse such association. It is therefore both dishonest and stupid.

In this connection it is important to prove to the patient that ever since early childhood he has trained himself to an attitude of *protection against life*. If the anamnesis (remembrance under treatment) has not produced sufficient material for this purpose the analysis of dreams should provide the needed proof. If the patient can only be convinced of this, it will be relatively easy for him to move out of the blind alley in which he finds himself, and the control of his waking consciousness will help to oblige him to leave his hidden corner in it.

(*c*) *Social Feeling.*

Practical examples must be used to impress the truth that no one can follow the rules of social conduct who has not developed his sense of social feeling. As the development of social feeling is of prime importance, the doctor must concentrate all his skill upon it, and do his best to invent all sorts of new and sensible interests for his patient so that he may feel the truth of it in the every-day experience of his life. The doctor must make the Socratic method of conversation his own. He must be able to break down the mass of neurotic entanglements and must not mind calling his patient's attention again and again

to the facts which have distorted his mind, and make him take the trouble to think about human relationships and adopt an affirmative outlook on life.

The patient must be led to see that a child, who begins to think of himself 'as no good,' will do nothing but think of his own difficulties and thus be able to do nothing for others. Similarly if he is always thinking how he can show himself superior to others or do some heroic deed, he will have neither time nor patience to think of others, but his thought will always be directed on his own 'I.' A person who is continually engaged in 'compensating' a feeling of inferiority will have no chance of developing a feeling for the community. But for lack of it he will inevitably be condemned to self-torture and suffering, for no one goes unpunished who withdraws himself from the community. To avoid the suffering of a joyless existence man is bound to seek association with his fellows and to make the principle of action and self-sacrifice for the common good the axis of his own behaviour. It is only in connexion with the community and its tasks that we can develop common sense, self-reliance and courage, win happiness and feel everywhere at home.

'To give is more blessed than to receive,' and the stammerer has got to learn this and that the road to happiness is not by way of self-assertion. On this point nature is inexorable. She is harder than we are. Those who will not play life's game in the spirit of generosity and comradeship will pay the cost in a friendless, joyless existence. Only on condition that he learns to *think more of others* and out of his own feelings of plenty and power to give to others, will the patient be able to free himself from the fetters of inferiority and discouragement.

(*d*) *The realistic attitude.*

To explain the difference between a 'personal' and a 'realistic' attitude towards life simple illustrations may be used so as to induce the patient to get rid of his egoism.

The following is an example :

When a child builds a castle out of his toy bricks, the grown-ups who are looking on either praise him, or advise him in a discouraging manner, or perhaps 'put him right.' The result on the child is that he no longer builds his castle for the pure pleasure of building, but with an eye to what the grown-ups may think of it and of him, and how they will judge his 'worth.' Whether the child expects praise or blame makes no difference—the freedom of a realistic attitude is lost for him. Other illustrations can easily be found which will show the stammerer how he has failed to reach a realistic standpoint. For this purpose also the behaviour of other neurotics may be mentioned, e.g., the fact that some people cannot add figures or sign their names while others are looking on ; for the fear of failure in their simple task, and the dread that onlookers may be surprised at them inhibits the function—exactly as in stammering. A realistic attitude carries within the power to deal with men and things on their merits—without regard to the self—and it necessarily implies an honourable and humane spirit.

These illustrations should serve the purpose of enabling the patient to take up a positive personal attitude towards life and lead him to the *revision* of his former point of view. When his reflective and critical faculties are once awake, he will find it easier to loosen the bonds which he has forged by long practice between the mass of feeling that takes possession of him in every situation where he

is conscious of inferiority and the mechanism of speech. The doctor must of course be able to identify himself with his patient to such a degree, that he can use his sympathetic knowledge of the patient's history to help him to direct his efforts to those points where the bonds are weakest. Without sufficient sympathy there will be a tension and a disturbance of the doctor's relations with his patient. The patient's defensive tendency will be brought into play and every move which the doctor makes will be unfailingly answered by a countermove, just as in war. The doctor must never forget how heavy the sense of inferiority is in the mind of the stammerer, and how it exerts a pressure that at the first sign of danger will express itself in compensatory combative form.

To avoid setbacks the doctor must grasp the patient's plan of life in all its details and ways of expression. Particularly he must have a clear conception of the situation in childhood at which the arrest of normal mental growth took place. This ' point ' is the key of the situation, for the child was then only potentially neurotic, his weapons of offence and defence (including stammering) were not yet forged or trained by practice ; e.g., in the case of a ' spoilt ' child we may expect to find that the arrest took place at the point (which was determined by his desire for superiority) where he had always been dependent on the help of others. Such a child will be afraid of competition, and draw back with a halting, hesitating attitude from it—this attitude having been induced by the bad education which he received at home. If the point of arrest be not detected and the patient consequently not persuaded to apply the whole of his courage just at this point and at no other, the disappearance of the stammer cannot be expected. On the other hand if only the process of revision is directed straight

upon this point with all the help which can be obtained from systematic encouragement and suitable training, the patient will be loosed from his 'vicious circle' and lose his stammering.

It must not be disguised that it will not be easy at first to guess completely the connexion between the patient's plan of life and such methods of neurotic behaviour as are expressed in a merely passive manner. A sulky attitude, which in stammerers is usually the expression of a revolt against the influence of those stronger than themselves, must be seen to be more than just the sign of a dead point. Caused as it is by the dominance of the leading line it points beyond itself to the presence of a discouraged ambition, which is trying to get away from what are only the logical consequences of all social intercourse. The gestures which many a stammerer uses in speaking and which seem to beg for help are harder to understand. They are intended to appeal to those around him not to thrust fresh burdens upon him. There is no end to such disguises. The stammering itself may also be regarded as a passive means of declining to undertake what is demanded, of trying to make use of others, of spoiling sport, of conquering through weakness. The doctor has got to make sure that he understands the exact way in which every stammerer is accustomed to express his concealed tendencies to isolation and self-assertion through the jargon of his impediment, if he is to use the weight of his influence—we underline this point yet once again—on the urges which *release* the stammer and *not* on the *resulting* stammer itself. He must indeed be very closely attuned to catch all the finer tones which the stammering mind produces in trying to rescue its illusion of superiority! For instance to enjoy the role of 'hero,'

the stammerer thinks himself a Don Quixote. It is true that he does not tilt against windmills but wages war against the impediment which is the (unconscious) product of his own distorted mind. He carries out repeated attacks against it, feeling himself an heroic conqueror if he should chance on some occasion to speak fluently in spite of his stammer, flattering himself that his success in life would have been great if an unhappy fate had not hindered the development of his speech. The stammerer clings to and wants his stammer not only as a weapon of offence and defence, but also so that he can celebrate victories on that side of his life which is most useless—it is a defence and justification of his whole false style of life. When all these inter-connections are clearly grasped, we can see why his impediment comes to have a personal interest for the patient, and why he sticks to it so firmly till he has been brought to understand the real ' fundamental tone ' of his own life and to effect a complete change in it.

The work of encouraging the stammerer and of making him a useful member of society is naturally enough one which requires a great deal of educational art. No very fixed limits can be laid down about this, for the forms which the different styles of life of different patients take make a different method of encouragement necessary in each case. Apart from the differences, the following main lines may be laid down.

(*a*) Direct encouragement must be avoided. The stammerer is quick to suspect that it contains an element of compulsion, and reacts to it with a ' protest.' Individual psychology has found that indirect methods of encouragement and practice are much more effective. The first step is to get the patient to realize the following three points :

(1) The doctor is bound to hold unreservedly to the working hypothesis that no difference of native endowment exists between stammerers and normal persons ; that what is called endowment depends merely on the distribution of energy between protective tendencies and useful action. If the doctor would rescue his patient from the superstition of the insufficiency of his own endowments—which lies at the root of his sense of inferiority—he must not only tell him that he has the same endowment as other men, but must let him see in all his intercourse with him that he really believes this to be true.

(2) The patient also must be made to realize that life is constructive, every man being bound to pay the ' reckoning of life ' in his ' *calling*,' ' *social life* ' and his behaviour towards the ' *opposite sex*.' Nervous traits invariably show that there has been failure. In this connexion the overwhelming importance of right action in the spiritual and moral spheres must be explained. All depends on what a man does with what he brings into the world. To struggle with difficulties increases power. That is why we generally find that men who have surmounted great difficulties in childhood achieve most. The pessimist avoids difficulties and thus remains a coward ; the optimist finds in them an impulse to the improvement of his method of life and is always ready for every good work.

(3) Finally the stammerer must understand that his struggle for power is a useless and neurotic waste of energy, for his ' deeds of heroism ' only take place in his imagination. The man who does not honestly and usefully work for the community in the spirit of goodwill is in the

long run no good to anybody. In spite of his exaggerated caution he will not make his life easier but more difficult, and so long as his attention is self-centred, the neurotic will be over-anxious about consequences and fail to develop courage. Selfish action for a fictitious end can never be satisfying or encouraging. Action on the other hand that is not centred upon the satisfaction of personal vanity but is directed towards the common good has real value, and without it courage and self-reliance cannot exist. The doctor cannot sufficiently emphasize that every one except an idiot can overcome his difficulties and make himself competent in some thing. The stammerer must be taught that the first step on the road to cure is to learn to face difficulty without discouragement or evasion.

(*b*) Doubts of success and the ' nervous will ' may be bracketed with suppressed rebelliousness as causes which take a great part in preventing the development of courage. The stammerer who is immersed in his own phantasies is constantly tempted to follow his ' leading line ' in plan and intention only. He will juggle with his will i.e. he will ' *only will*,' but never seriously *undertake to do*. Should he find himself faced by the need for action he immediately begins to think: ' I will, but . . . I cannot,' thus inhibiting the spontaneity of his vital mental powers. Without trying to prove to him that the will by itself is a mere abstraction, the patient must be made to understand that the will is nothing without action. In his effort to cure the neurotic will, the doctor must appreciate fully the fact that the neurotic will never ends in useful action but merely subserves the patient's fictitious aims in life. In correspondence with his halting conduct the stammerer meets every occasion

calling for decision with irresolution and doubt, and when he sees two courses before him he has not the courage to decide between them. He experiences the resulting feelings in his own mind as an uncomfortably maintained state of balance, which he ascribes to the exterior circumstances themselves. The fact, however, is that it is his own unrealistic (self-centred) method of behaviour which is to blame—his habit of always expecting others to do everything. If his courage is to develop, he has got to learn to accustom himself to regard state of balance as an opportunity for making up his mind and passing to decision from indecision. Life calls him to these decisions. Their solution will bring about a gradual reduction of his former passive attitude and cause him to become more realistic and self-reliant, and thus a useful personality. The doctor must, of course, have cured himself of any tendency to hesitate and balance himself between alternatives if he is to help the stammerer.

(*c*) In giving treatment the doctor must always bear in mind that the first necessity for the healing of stammering is to encourage these fugitives from life; to bring them back to responsibility and self-reliance. The best means to this end is to arrange the separate interviews and the whole treatment on such lines that interviews and treatment may correspond to and support each other. We give here the general lines that have been proved to be best as the result of the practice of individual psychology.

(1) *The establishment of a really friendly relationship* so as to win the patient's co-operation and make him more disposed to be influenced as he ought to be.

(2) *Bringing to light the patient's false style of life* (plan of life) and helping him to get rid of it. His difficulties will be good-humouredly explained to the patient as errors which are intelligible enough but unwarranted by the facts, but he must be allowed to feel that the doctor fully understands how out of his inner need he 'could not help it.'

(3) *Encouragement* (*without directly mentioning it!*), aimed especially at getting the patient to start doing things and widening his circle of general usefulness.

(4) *Release.* The necessity for personal action must be emphasized in such a way that the eventual formation of a relation of dependence towards the doctor—analogous to the earlier symbiosis of mother and child—is entirely avoided.

Lines of treatment to suit special circumstances from other points of view are quite possible, but the above outline will be found useful in most cases.

(*d*) Finally, as regards getting patients to do things, the doctor must be clear that success will not be won without a great variety of methods devised to meet the differences of individual cases. Some will love the course of treatment, they will regard it as a rope up which they may climb to freedom; others will only be induced to move one step at a time as chance offers. But the doctor will always succeed in setting free the productive forces, if he learns to appreciate thoroughly the patient's point of view and so succeeds in releasing the energy which will be of most assistance to him in his task. To sum up the chief points necessary for a rational treatment of stammering:

(1) The doctor must be persuaded of the truths of the doctrines of individual psychology. He must avoid at all costs all reliance on personal authority ; and on the question of inherited dispositions and capacities his attitude must be so unequivocal that he will create an atmosphere of unvarying human warmth and understanding helpfulness in his intercourse with his patients.

(2) To influence his patients he must try to understand them completely so that he may induce them to alter their neurotic lines of life. The doctor must put aside the treatment of the symptoms themselves ; for to treat them does not touch the root of the trouble, and even if anything could be done directly to remove them it would only be transitory.

(3) In discovering the plan of life of a stammerer the problem for the doctor is to understand the life style of each individual as a whole, and at the same time to find out the exact moment in childhood in which the course of his development was diverted in a false direction. It is at this point that the patient has always begun to forge the weapons of attack and defence which have resulted in the stammer.

(4) The ordinary means (which are used in education) of explanation, encouragement, and practising to do things are quite enough to bring about a gradual abandonment of the patient's false plan of life.

(5) These means must be deliberately used to break through the hard shell of the patient's self-centred disposition. A thorough revision of his mode of life should accompany this. He must be made to realize as

part of his own life his duty to the community, and to make this the principle in future of his own conduct.

(6) A neurotic will produce nothing. Production is the result of work realistically conceived and executed. The capacity to do can be set free by the doctor, but the patient alone is responsible for its development and exercise.

(7) The development of social feeling and the courage involved in self-reliance stand in a direct relation to the removal of the inner state of stress which has resulted in the stammer.

CHAPTER IX

PROPHYLAXIS

WE have already often emphasized the fact that if wandering in by-paths is to be avoided, the mental development of the child ought (in accordance with the principle of the Practical Reason), to be directed to the common good, with the idea of fitting him for a place in the community. Individual Psychology thus treats the community as an Ideal, as something that ought to be—whose demands have absolute value, to which the individual in a long life can only gradually approach. Each individual is, however, in fact fast bound in a world full of cosmic, mental and sociological obstacles, and these are created for him not only by the whole of his environment but also in part by his own body. It is hardly necessary to say that the only way of at all successfully overcoming these obstacles is to approach them as a task which can be solved. If a child can once be induced to attack its obstacles, then every piece-meal solution, every successful struggle with the 'recalcitrant material of things' will increase his courage and do something to conform his personal aims and desires to a willingness to work for the common good. This is the only way open to the child from a self-centred to a realistic attitude. It is only thus that he can compensate the feeling of smallness, from which he suffered as a young child, by a development in the direction of

real progress and escape the danger of an increase in the sense of inferiority on the one side and of a neurotic over-compensation on the other. The best prophylaxis against stammering will, therefore, be to try to prevent any increase of the feeling of inferiority and to help the child as far as possible to overcome it.

The observations made by Individual Psychologists go to show that a child's style of life is firmly fixed at the age of four or at the latest five years. The following remarks will therefore apply to the first five years of life. If the child's development during these years has been normal, and if he has learnt not to lose confidence in his own strength by occasional failures, but has had the pluck and patience to face and overcome his small troubles, there is no fear of his later on turning his back on reality and shutting himself off from life by a barricade of nervous symptoms.

In our account (in Chapter V) of the factors which are likely to bring about a dangerous increase in the feeling of inferiority, there was unavoidably present an attempt to estimate difficulties. We were compelled to brand as erroneous methods of behaviour which could not be justified before the tribunal of Society, because opposed to its vital interests. We have thus already indicated most of what can be said about the prevention of nervous disturbances, and especially stammering, and the only thing left to do now is to classify the most important considerations with such additions as may be necessary.

1. *Inferiority in a bodily organ.*

It is clear that the development of the child's body and the removal of any troubles that arise in it are matters

for medical treatment. Children with bodily defects are tempted to repine at fate and meet life in a quarrelsome spirit. It is therefore important, if possible, to remove the defects. If the weakness or illness continues, two mental consequences follow ; firstly, as soon as the child begins to notice that he is left behind by his more healthily constituted playmates, he becomes discouraged ; and, secondly, he is inclined to stick to the privileges accorded to illness and thus weaken his self-reliance. With sufficient care these evil effects can be diminished or avoided—at least enough to prevent any serious growth of the sense of inferiority. Children cannot indeed be talked out of noticing defects which strike the eye and which are irremovable. The parents must, however, avoid discouraging the child by letting him realize their own want of hope that he can be cured, and they ought to explain to him that the organic defect gives him a chance of being specially distinguished, since they will take good care to find a suitable profession for him and he will have learnt so early to develop his courage to bear and do.

Unhappy social and economic circumstances of the home make demands on a child's mind which often sharpen his sense of inferiority. These difficulties all too easily create revolutionaries who try to upset ' the fat men ' in the interests of the thin. They have suffered from a lack of the moderating influence of education, and any help that they may get can only come from the community. It ought to be the chief task of social politics to take care to prevent, as far as possible, children from suffering evil effects from the poverty of their parents. The child has a right to expect this and to resist being thrown back on to the humiliation of private charity.

Public institutions for the care of children are still far from being so well arranged as to prevent the damage to the minds of children which is caused by the economic circumstances of the home and by generally held ideas about the inferior nature of some callings. As long as the individual is not helped by some social prophylaxis, we can only expect that children brought up in such circumstances will always suffer from an excessive sense of inferiority—even if the parents do not themselves make a complete mess of their education.

2. *The constellation of the family.*

The difficulties which we have now to pass on to consider all result from the fact that the child from the day of his birth stands in a natural relationship to those around him, who are themselves as much bound by it as he is. Disturbances arise especially if the mother fails to do her duty. Mistakes of this kind, which are nearly always disastrous for the child, will only be avoided in the future if mothers are better trained for their tasks than they have been generally in the past. Without such training (which must, of course, include the removal of any neurotic symptoms which the parents themselves may possess) few parents will be able to divide their care and love equally between many children. An unconscious disposition of the parents may so influence their behaviour that the sensitive nature of one or other of the children may be injured by it and the child discouraged. At all costs the rearing of 'Mother's darlings' or of 'black sheep' must be avoided.

Sex also must not be made a reason for preferring one child to another. Our modern civilization is so much based upon the man that great care must be taken over

this, because a girl sooner or later finds out what a low value has been generally placed upon women. Parents ought not only to defend the equality of the two sexes as a theory, but they ought also by their example to do what they can to combat the general opinion that exists to the contrary. The position of an only child carries with it such serious and great dangers that it is difficult even for the wisest parents to avoid them all. If the parents know of them, it is always possible to protect the child from the difficulties which might damage his sense of self-confidence. With this object greater trouble must be taken to prevent the child being surrounded day and night by over-anxious care and his every action watched with anxiety. Since single children growing up amidst older people are especially exposed to conditions which may damage the development of their feeling for the community, every opportunity to give them companions of the same age as themselves to play games with must be taken. If there are none near the house they must be found in a kindergarten, where too much school work is not done, or elsewhere, where there is a chance for games in common.

If the child is not the only one—and he ought not to be—it is worth while to prepare him for the birth of a brother or sister, so that it may be unlikely that he will feel damaged in his self-esteem, when later on he sees the interest of everybody more or less concentrated on the new baby. It is easy to do this by telling the child that he no longer needs so much attention, for he is already growing big and independent. And if he is also given a chance of helping in the care of ' baby,' he is as a rule quite ready to play at being grown up. In this way the danger is avoided of the older child feeling dethroned by the younger and becoming jealous.

To make the position of the *youngest* child easier, the parents will be well advised to persuade the older children to co-operate in his education. The brothers and sisters can with very little tact be induced to ' keep an eye ' on the youngest and help him in a friendly way, and they can often do this better than the parents themselves, who have forgotten the many difficulties of childhood. If brothers and sisters help him, the youngest child is not likely either to suffer in his self-esteem or be so spoiled as to lose self-confidence.

3. *Education.*

It is well known that there is much too much of this. This excess is, as we have already pointed out, far less due to deliberate educational plans made by the parents than to defects in the parents' attitude towards their children. True that it is not right to go to the other extreme and try not to influence the child in any way in the belief that any attempt at influencing him is bound to go wrong. Such a principle, moreover, could never be carried out in fact, for in the first years of his life a child could not live at all without help. And, finally, it must be remembered that all contact and intercourse with a child inevitably influence him—even though they be not part of a systematic education.

True education will take care to avoid any disturbance in the natural development of the child. To use the words of Traube: ' Educating means nothing but walking by the side of, not driving, not pushing, not pulling, but always knowing exactly where the boy is running, what the girl is thinking, and taking up quietly a position to windward when a storm is blowing too fiercely.'

If the teacher keeps firmly in mind the fact that the

natural line of development of the child starts from an original feeling of powerlessness towards its surroundings and runs in the direction of a compensatory effort towards self-assertion, he will see clearly that the only right road to education must be to lead the child with *friendliness* and *goodwill*. The aim must be to build a firm foundation for the child upon which he may conquer his sense of inferiority and use his impulse towards self-assertion for purposes of real progress. The teacher must not doubt that for the accomplishment of this task, which is at the bottom of the whole problem of education, the best preparation which can be given to a child for its walk in life is to teach it to develop its courage to do and suffer. If this development is not successful and if the child wanders into by-paths and develops an over-strong desire for self-assertion, which will not fit him for the facts of life, then he will never win anything but sham victories and he will suffer real defeats. Both will have an equally bad effect upon the development of his courage.

We have already emphasized the fact that the teacher ought to show friendliness and goodwill to the child. We have deliberately avoided the use of the word 'love,' just because far too often love derives its power from a self-centred impulse which cannot be good for the intelligent guidance of the child. Friendliness and goodwill include all the positive and encouraging elements which are necessary for the child's healthy growth—such as true comradeship, equable patience, good temper, deep sympathy, etc. It is worth emphasizing that the child ought in no circumstances whatever to be deprived of friendliness and goodwill, if its capacity for human intercourse is not to be damaged. This is the reason for forbidding the use of all punishments which are based on

a temporary isolation of the child, e.g., putting the child in the corner or ordering silence.*

The teacher who shows friendship and goodwill will also make it easier for the child to fit himself for the civilization into which he is born and cultivate a community of aims with it. To take the most elementary instance this is true of washing, eating and sleeping. If the use of compulsion is being deliberately avoided in education, it will be avoided even at meals. If the child is fanciful over certain dishes, a very small dose of hunger will soon cure him. Difficulties will only arise if force has bred defiance in the child. The protesting self-assertiveness of the child will then be provoked to endless conflicts with his parents. Going to bed again will only cause trouble, if it is made a test of obedience. Children are apt to complain that the little ones have to go to bed first. All such difficulties are easily removed by saying to the child : ' You too will grow big and strong and as the body grows most in sleep you will help yourself most by going to bed. We don't want to make you go, but are only anxious for your growth and health.' As regards cleanliness, bedwetting which often is found with a stammer may cause parents great anxiety. Bed-wetting shows that there is too great a dependence on the mother, and shows that the child feels that ' Mother has *got always* to be busy with me.' We know that this points to a defect in education. The best way of removing

* Amongst these punishments is that of sending a disobedient child to Coventry. I have never come across a case where this did any good, and we could hardly expect any other result. Childish naughtiness is after all just an inclination to break the rules of the community and evidence that the child's social feeling is not yet strong enough. Now if the child is excluded from Society and condemned to impotence, he will by way of protest keep himself to himself, and if the punishment is repeated he will only join his family afterwards again upon the footing of a ' peace ' which is more like war.

bed-wetting is by taking as little notice of it as possible and breaking the too close connection with the mother. But this change of disposition must be effected without any diminution of friendliness and goodwill.

The same is true of a whole string of faults which arise during growth—such as thumb-sucking, nail-biting, picking the nose, etc. They are the expressions of an inner disposition and show that the child is for some reason unwilling to conform to the rules of life around it. The rebellious opposition which is hidden behind these forms of naughtiness asserts itself if any one tries to get rid of them by the exercise of authority. Friendly persuasion is the only means which is of any use, so that the child's sense of smallness may be spared, and any development of the ' manly protest ' may be avoided. By threats and authority the child will only be induced by its obstinacy to stick to its faults and make the whole question a regular battlefield. People responsible for education ought to cure themselves entirely of the mistake of thinking that it is only warnings or complaints which do any good and they must also avoid ' preaching ' and over and over again telling the child things which he very well knows for himself. If you say to a child, who is only able to face its tasks with great difficulty owing to some deep-rooted discouragement under which he is suffering : ' You really must not be so dirty '—the warning will do him no good, at all. If you do not try to get to the root of the child's difficulties you can hardly expect to effect a change and remove his fault.

The things that a child can do, and how far he has got with his speaking and play, are of most help in forming an opinion about him. As a rule children in their third year have already mastered a great part of their mother-tongue. As with all his other performances, the child makes a

game of learning to speak. His first sounds are entirely of his own invention and are a development of that inborn power from which courage is derived in later years and which enables the child to advance along the road to progress. The first efforts at making sounds take place without the deliberate intention of the child; they are chance noises, but deliberate noises are soon joined on to them, and these are called forth by the talk of the people around him. These noises gradually lose their chance character, because the child goes on to repeat the sounds deliberately for the pleasure which his own voice and the exercise of his muscles give to him. Since no speech can just be picked up but has got to be mastered by repetition, it is these repetitions which enable a child to build a bridge to full conscious knowledge of his mother-tongue. The child is at first unable to understand the words of those around him and so he feels compelled to call his own creative powers to his assistance, and at first builds up a speech of his own in which he only uses a fraction of the noises he has heard from those around him. He alters these noises freely and enriches them by invented onomatopoetic additions of his own so that as a rule it is only those who are always with him who can understand him.

Grown-up people injure a child when they repeat his baby talk to him, because by doing so they delay unreasonably his learning to speak normally and make it more difficult for him to get on with other people. Many a mother is delighted because she and she only can understand her darling's language and has no idea that she is keeping her child back at the first stage of his learning to speak, because she selfishly wants him for herself and does not want to train him up for his place in the community. The child is doomed to suffer for this behaviour

of his mother in a retarded development of self-reliance, which sooner or later will make him backward when compared with children of the same age whose speech is better developed. The consequence of this will be an underlining of his feeling of inferiority and insecurity.

A child can only be taught to use its imitative instinct in learning to speak if grown-up people repeat each word or sentence to him clearly, just as they would to another person who is grown up. As the meaning of words is only slowly learnt, the child ought never to be pressed or words used to him which he cannot yet master. If he mispronounces a word, it ought to be pronounced rightly to him without emphasis or anything to suggest compulsion. It is true that this gives trouble, but there is no other way of helping a child to speak. But if the trouble is taken, and the child is given time to learn to speak correctly—in connexion with which he cannot help beginning to train his logical faculties—then what W. Stern calls the ' need to speak ' will never reach a point that will cause an ' initial ' stammer to make its appearance.

Play also is of decisive importance for the mental growth of a child. At first play is confined to primitive movements which subserve a biological finality. But as individualization proceeds, it becomes more and more useful to the aims of the personality. Primitive rhythms fall away ; preparations for what will be the chief aims of the individual move to the foreground. A child whose development is uninterrupted passes joyfully and actively to games, and perfects the faculties which he will need in real life by developing in play his spirit, his imagination, and his skill. It is quite different for a child whose development has been interrupted and who has used games only for the sake of self-assertion and mastery

over others. Real progress has little to interest such a child, for in it the element of mastery over other people is lacking. He brings an unwilling mind to every game, and his lowered self-esteem and desire for superiority combine to make him afraid that he may fail. This anxiety makes him a spoil-sport, and causes him, unless he sees a chance of being first himself, to leave all the trouble to his playmates.

Every game gives opportunities for developing one at least of the following three factors : preparation for life, subordination, and leadership. A child who has realized a sensible attitude towards play will be able to develop the first two at least of these factors, and will not feel himself under compulsion because he has to develop them in friendly competition with playmates. But if a child makes play a means of seeking superiority, there is too much reason to fear that he may not be able to succeed in blending his instinct to assert himself with his social instinct. He will be likely, under the influence of any failures, to withdraw more and more from his companions and to play his games by himself. If this tendency to isolation is not kept in check by encouragement, he will proceed to construct further mental protective tendencies, to suspect danger everywhere, and get into the habit of avoiding difficulties. Owing to this series of connexions it can be understood that it is quite easy to guess the amount of a child's social feeling from the way in which he behaves at play.

The development of the *capacity for intercourse* presupposes a steady growth of courage. If this is to take place the mother must not run to help the child over every difficulty, but leave the child to get over by himself any conflict with his brothers or sisters or companions. As all children desire to assert themselves, conflicts are

inevitable. There is nothing wrong in this, for such conflicts with other children are very useful and teach the child—since he is not from the first necessarily the weaker party, as he is with grown-up persons—to find his own place and to learn the proper balance between the defence of his own interests and a proper regard for the rights of others. Grown-ups should give up the habit of setting up a sort of court to try out the causes of quarrels and find the guilty party, for this may easily mislead children into thinking that all that matters in life is to put your opponent in the wrong, so as to be able to enjoy his defeat when a court decides against him. Instead of acting as judges, grown-ups ought to explain to the children that peaceful friendly co-operation is much better than any possible quarrel, for a quarrel is always bad both for the one who has the best of it and for the defeated party.

In general parents ought to be like friendly lookers-on and leave the way open to the child so that he may gather his own *experience* and learn from it. A very large part of the education in *self-reliance* depends upon a passive attitude of the parents—which after all is not as easy as it seems. To watch a small child pulling on a stocking makes on a mother demands for a good deal of patience. Too often she thinks that she has not time, and takes away from the child the chance of learning a little self-confidence with the words : ' Give over. You can't do it yet.' This behaviour naturally discourages the child by emphasizing his incapacity, and will prevent him from making further efforts. To prevent a repetition of the snub, next time the child will allow himself to be helped from the first and console himself by thinking that anyhow ' Mother is my servant.' If such experiences are continually repeated, the child's spontaneity and

naturalness will be more and more restricted and a tendency to want of confidence show itself. For the moment safety and protection will be obtained, but the child will be all the more likely to fail, when the need in life for self-reliance and action arises. Parents must therefore make a great effort to be patient enough to remain merely friendly spectators. Interference on their part can only work evil and is likely to prevent the child from developing his capacities to meet the needs of life. Parents ought to treat the child's interests as just as important as their own and confine themselves to giving the child a chance of developing his courage and gaining experience. The sooner a child can dress himself and manage things for himself, the more he will acquire self-confidence and naturalness, and the less friction will he meet with in making real progress and facing the demands which the community will make upon him. And we must never forget to impress upon the child that with courage ' impossible ' tasks become possible.

The development of independence goes hand in hand with that of the *feeling of responsibility*. Most parents try to teach the sense of responsibility by a system of rewards and punishments. This is of not much use because it may so easily make the child fail to see the natural consequences of his own actions. If the teacher takes the sword of justice in his hand, and plays the part of God in rewarding good and punishing evil, his behaviour will both have a bad effect on the child's feeling of self-esteem and bring into undue prominence the artificial nature of the consequences of any ' justice ' of this kind. The child will only learn to be afraid of being condemned, if his parents find him out in his misconduct, and he will draw the not unnatural conclusion that punishment follows ' being found out ' and not the ' crime ' itself. This

conclusion is only too widely spread already! If the child travels along this road he may be tempted to use the weapon of cowardice, namely, deceit, for he will think that it does not matter about being blamed, provided he is not found out. Besides, there is the joy of triumphing over the stronger party by using cunning to escape detection! The same is true of a system of rewards. This, too, opens the road to cheating and does not always result in straightforward behaviour. 'Discouraged' children after all are not very much to blame if they use the weapon of deceit against a false system of education; for they are only acting under the influence of the desire to assert themselves (although this desire has here gone 'clean off the rails.').

The feeling of responsibility can only be developed, in fact, if the child is allowed to learn from experience the natural consequences of his own actions. Here also parents must avoid preaching and prophesying; their only task is to guide the child, without his noticing it, in such a way so that he suffers no serious harm. The more a child learns the consequences of his actions the more he will be ready in serious life to face his faults bravely and take their consequences boldly upon himself.

If a child has once learnt this, he will grow into a brave man with a lively sense of responsibility. A child so trained will never be in danger of feeling himself cramped by life, or of surrounding himself with a 'neurotic,' protective impediment; he will rather possess the feeling of equality and face the most serious situations convinced, as he will be, that he will be able to find the solution of any difficulty. The most detailed educational system will never be able to prescribe rules for all the variety of life, and we have no intention here of trying to give directions for every possible case which may arise.

Having regard to what we have said in earlier chapters we have confined ourselves merely to emphasizing the methods of education which will secure a normal straightforward development. We have recommended above all that those responsible for the education of children should show friendliness and goodwill; and we have seen that serious mistakes in education can be avoided if the parents never withdraw this goodwill from their child; avoid any kind of authoritative pressure; show great patience, and allow the child room to develop his courage and self-confidence. If the child, too, is firmly convinced that his parents will let him work out his own life, and trust in his future, then the pressure of his original feeling of inferiority will gradually decrease, for if the child carries no burdens with him from the past he is sure to avoid a joyless, self-centred style of life. The best protection which a child can have against discouragement, and against the creation of neurotic symptoms lies in the fact that his past has lost the power of overshadowing his present and his future. Freed from the fetters of his feeling of inferiority such a child will develop in a straightforward way and in a not distant future make friends with every difficulty of life. If, however, to use Lienhard's words, he has 'the best power of all powers, namely, that of feeling grateful to the obstacles which have gone to educate him,' then the game is won. Nothing will ever disturb the peace within his soul.

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